

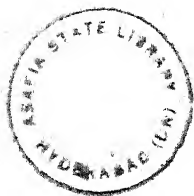
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OUTLINE OF
ENGLISH ARCHITECTURE



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1 ST. PAUL'S CATHEDRAL AND LUDGATE HILL, from a lithograph by E. Walker. 1832.

19076

OUTLINE OF ENGLISH ARCHITECTURE

AN ACCOUNT FOR THE GENERAL READER
OF ITS DEVELOPMENT FROM EARLY TIMES
TO THE PRESENT DAY

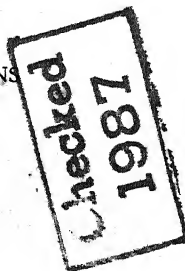
by

A. H. GARDNER

Associate of the Royal Institute of British Architects



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PHOTOGRAPHS AND PLANS



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ERRATA

Page 98, line 13, for "Architectual" read "Architectural."

Page 54, line 2, for "Auques Mortz" read "Aigues Mortes."

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The plans are almost entirely taken from the publishers' collection and from standard works of reference on churches and houses, but the Birmingham Public Library must be thanked for photographing those of the two Coventry churches.

The author has pleasure in recording his thanks to Mr. C. M. C. Armstrong, F.R.I.B.A., for reading the proofs of this work.



INTRODUCTION

THE aim of this book is to give a readable account of the development of architecture in England, and it is written for the general reader who wishes to understand something of the buildings which form so rich a background to the English scene. Such an account must obviously be general—even superficial—in treatment, but the author has endeavoured to introduce sufficient detail to make it a serviceable work of reference on general principles, while maintaining a proper sense of proportion between the different periods. It is hoped that the continuity of architectural evolution has been sufficiently emphasized, for no greater harm can be done than to suggest that the subject may be subdivided into periods neatly labelled "Lancet," "Tudor," "Regency" and so forth, each open to individual admiration, castigation, or—worse still—reproduction.

For the benefit of those who wish to make a more detailed study, a brief selected bibliography has been added, the essential books being particularly noted. The intention here is to show that architecture has always been a living and adventurous art, expressing both the hopes and failures of the age which produced it. Style (in the period sense) is the stamp of the age, and not something to be consciously acquired, as may readily be seen in the case of Gothic Revival, which is as different from the real thing as the Victorian age was from the mediæval. Only in a few isolated cases was a false antique produced with such success as to puzzle the expert, for only where the purpose of the building, the design, construction and workmanship were mediæval in character could an equivalent effect be expected. Imitation, in fact, if the sincerest form of flattery has always been a very second-rate form of art, though, as we shall see, typical of certain periods of development.

We shall better understand the question of style if we consider the aims and limitations of the building designer (whether he be called architect, master mason, or whatever term was current for the species). His problems fall fairly clearly under three main heads. First, he must satisfy the requirements of his client with regard to the purpose served by his building, which may be quite simple, as in the case of a barn or tomb, or extremely complicated, as in a modern hospital. This we may label the problem of convenience or purpose. Second, he must observe the limitations imposed by construction, so that his design can be practically translated into reality. For instance if only stone is available, the

number of supporting piers required will be very different from that necessitated by timber or steel, and the roof will be arched even though a flat ceiling would be preferred. This is the problem of construction. Third, there is the much more exciting problem of æsthetics, which means the organization of mass, line, colour and texture, much as the notes of music are organized into a purposeful composition.

Now these three problems of convenience, construction and conception may be complementary or conflicting. It is the designer's aim to weld them into a united and harmonious whole. Nothing is further from the truth than the popular conception of a mystical dreamer, ambitious to create some striking *tour de force* of imagery. There is only one creator. The artist is an interpreter of contemporary trends, and a good design carries the germ of its own development, whether in art or literature. Pirandello has well illustrated this in his play *Six Characters in Search of an Author*—an illuminating parable of the gestation of a "work of art." In both art and literature the worst fault of all is an affected style. It is in the lesser periods that we hear so much about art for art's sake, with an undue emphasis on æsthetics alone. Sham half-timber for instance may be æsthetically defensible. It is because it is indefensible on the grounds of contemporary construction, honesty and convenience that we condemn it. No building is necessarily beautiful because it is convenient or durable, or *vice versa*. The secret is balance, or more particularly balance with purpose, for nothing is more irritating than a designer who cannot make up his mind. Such balance may be achieved by starting with a practical structure æsthetically organized (as in the Middle Ages), or with an æsthetic composition translated into terms of practical structure (as in the eighteenth century). Both achieve balance with purpose, in the one case by emphasis on structure, and in the other by emphasis on composition (or conception).

This brings us to another consideration—the reaction of the spectator. We are all victims of the habits of association. Our whole judgment of design is based upon precedent and tradition, for we must of necessity judge solely by what we already know, or have seen, and even this judgment is often influenced by our physical or mental state at the time. For this reason hasty criticism should at all costs be avoided, particularly of new or unfamiliar styles. The real test of good permanent art is that it "stands living with." Time soon exposes the cheap effect, however striking it may appear at first sight. The modern critic, moreover, is too often unfairly handicapped in this respect. How can anyone brought up in the meretricious ugliness of our industrial towns expect to see with unprejudiced eyes? It has been said that only children, savages and artists retain the gift of vision in these days. If this be

so, one cannot but feel that God is indeed merciful to the rest of mankind! It is an almost greater task for the modern architect to forget his boyhood habits of outlook than for him to learn the intricacies of his profession.

There is, however, another reason for this change of outlook, for the æsthetic conception of architecture—as of all art—varies with the ages. The Victorians considered that building became architecture only when it received the addition of ornament, or of some purely decorative feature, which raised it above the merely utilitarian. “No one would call the laws architectural, which determine the height of a breastwork or the position of a bastion. But if to the stone facing of a bastion be added an unnecessary feature, as a cable moulding—that is Architecture” (John Ruskin, *The Seven Lamps of Architecture*). This point of view was almost certainly shared by the Elizabethans, but the mediæval builders were more concerned with geometrical proportion symbolically enriched so that the whole should reflect the perfection of God’s universe. The eighteenth century also emphasized the importance of proportion, but within the limits of classical scholarship. “For it is not the Bulk of a Fabrick, the Richness and Quantity of the Materials, the Multiplicity of Lines, nor the Grandness of the Finishing that give the Grace or Beauty and Grandeur to a Building, but the Proportion of the Parts to one another and to the whole whether entirely plain or enriched with a few Ornaments properly disposed” (James Gibbs, *Book of Architecture*, 1728).

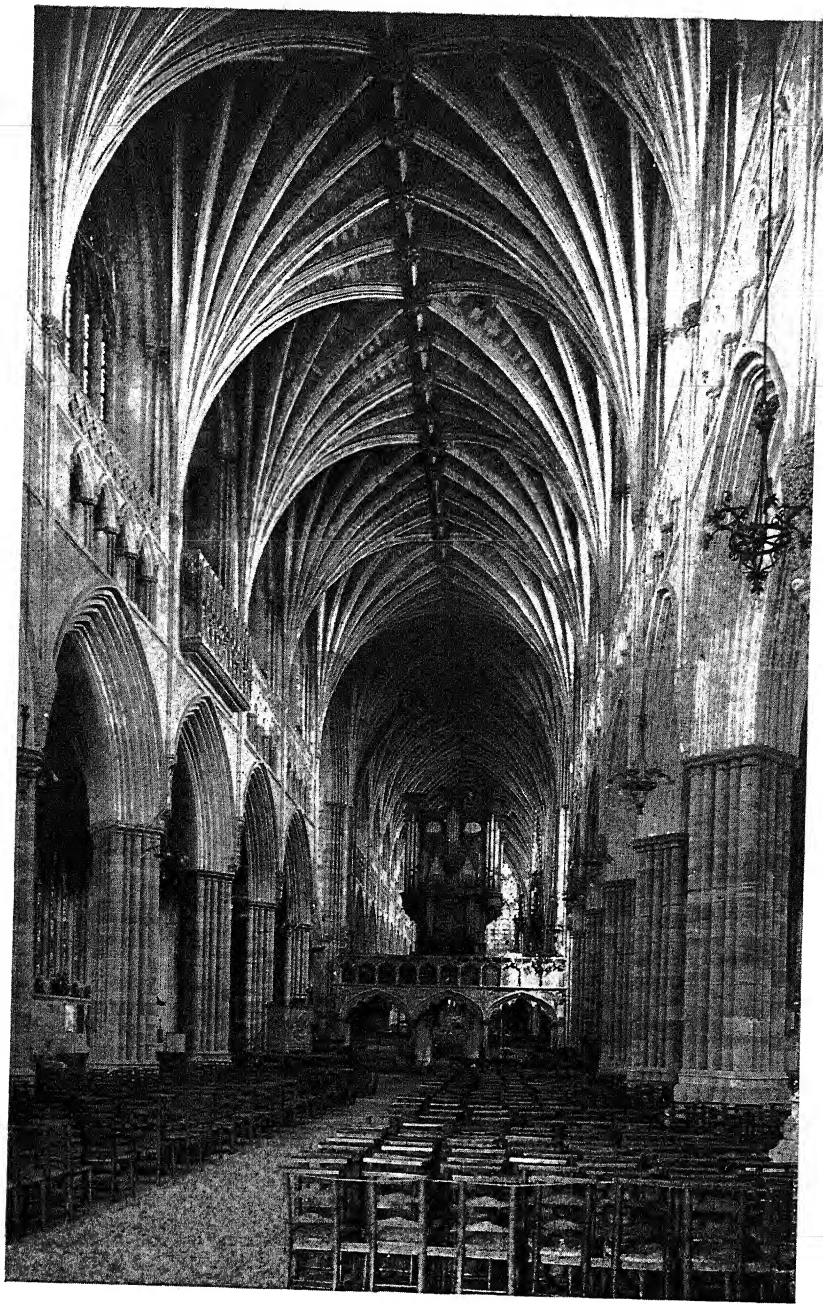
These conceptions were the more or less conscious theories of only a small band of accomplished designers. There was always a vast army of lesser men who just built as they had been taught, without worrying overmuch about such notions. Their work—the cottages, barns and factories of England—provides the background for those more monumental structures which attract the sightseer. Nowadays we are beginning to realize the importance of this humbler art, just as we now recognize the importance of ordinary folks’ social history as opposed to the mere tale of kings and queens and battles, to which our history books used to be limited.

This book must inevitably suffer from one defect inherent in all books on art. Art and æsthetics are visual experiences, and the only way to study and appreciate them is to look at actual examples. A book can explain the circumstances of their creation—place them, as it were, in their context—but it cannot teach the principles of visual appreciation in mere words. We suffer perhaps from too many commentaries, which get between us and the subject of our studies. The reader should use this book as a guide to, and not as a substitute for, architecture, and it is hoped that such a visual approach will be encouraged by the many excellent illustrations

accompanying the text, for the provision of which the author here records his gratitude to his publishers. Nor must he omit to acknowledge the debt he owes to his wife, whose encouragement and assistance have been invaluable.

A. H. G.

COVENTRY, 1945.



2 EXETER CATHEDRAL Devon: the Nave. *Ca.* 1340. (Screen Nineteenth Century.)



3 HOUSE AT ST. ALBANS, Hertfordshire. Late Seventeenth Century. (Since mutilated.)

ORIGINS

To find the beginnings of architecture, we must go back to the very threshold of civilization, and remote though that may seem from the subject of English architecture, a brief survey will better enable us to understand its foundations.

The first buildings seem to have derived from tents, caves and huts. It has even been suggested by Professor Lethaby that the rectangle was a comparatively advanced building shape, for the first structures were round and their stone foundations form the "hut circles" found all over the world, wherever early man has lived.

The earliest civilizations sprang up in the great river valleys of warm climates, where cultivation was comparatively easy. At Ur (in Mesopotamia) primitive remains of buildings have been found dating back to about 6,000 B.C., and by 2,700 B.C. Sargon I had founded the first historical empire. About 2,350 B.C. Gudea, King of Lagash, built a temple of which he has left an account. This describes the collecting of trunks of cedar, pine and other trees, while blocks of stone and supplies of bitumen were brought down the Tigris in barges (wood and stone have always been scarce in Mesopotamia). Copper, gold dust and silver came from the mountains, marble and porphyry from abroad. The king himself made the first brick in a consecrated mould, as a pattern for his workmen. He marked out the plan and laid the foundations. He is said to have built a fountain for the Gods, and a cistern of stone, while figures of heroes, a lion and a dragon were set up in the temple. The growing building (possibly a "zigurat" or stepped tower) is described as rising "like a mountain, or like a cedar growing in the desert." From this description it is evident that mysticism already played a considerable part both in design and in the conduct of construction. Building and decoration were erected as much to the glory of the gods as for the pleasure of man, and the spirit which caused the Greeks to carve magnificent sculpture in places where it could not be fully appreciated by the human eye is here apparent. It persisted throughout the ancient world until dispersed by the hard-headed men of Rome, and was born again in the Middle Ages. More practical matters were not, however, neglected. At Ur, drains were in use as early as 3,500 B.C., and the arched vault developed from a stepped or corbelled form of roof not much later. The use of the plain arch was known by 2,000 B.C., and of the column considerably earlier. The great "zigurat" had optical corrections as early as 2,300 B.C.

In Egypt the first king appeared about 3,500 B.C. Development can be considered as roughly parallel to that of Mesopotamia, but the geographical isolation of Egypt, and her magnificent building materials, have preserved far more evidence of her architecture and art. The Egyptian architect seems to have had an extensive training, linked with the priesthood and the mystical use of proportion and geometry. We may also note the use of painting and sculpture, often of heroic size, but never photographic in type. It must not be imagined that the Egyptians could not carve realistically, for small figures and models in tombs show that they could. Their sculpture was deliberately conventionalized for the sake of architectural composition, realism having no place in such a scheme.

It is interesting to note that civilizations of a comparable standard were developing in India and China. In the latter, dynasties were established by about 2,700 B.C., and in the Indus Valley two cities have been discovered dating from about 3,000 B.C. These were planned on the "gridiron" principle, with two-storeyed houses possessing bathrooms and a system of drainage. Recent investigations in South America show that there also civilizations grew up at least as early as in Egypt or Mesopotamia. (We must understand the extraordinary inequalities in development of both architecture and civilization, for even to-day there exist primitive peoples who have not developed as far as the ancient civilizations of the fourth millennium before Christ. Britain itself was still virtually in the Bronze Age when Rome was succeeding the sway of Greece.)

In the Middle East there was yet another early centre of civilization destined to influence the progress of the arts. This was Crete, whose king was called Minos, much as the king of Egypt was called Pharaoh. This "Minoan" civilization, with colonies on the mainland of what was to become Greece, was gradually overrun by Nordic barbarians, who settled down about the eleventh and twelfth centuries B.C., and later became the Greeks. It is usually considered that much of the material of Homer derives from this period. The Minoans—probably an Iberian people, like most of these early communities—were driven across to Asia Minor, where they formed the foundation of the Greek Ionian settlements. It is at least pretty certain that the voluted Ionic Greek column cap derives from Minoan origins, and that Crete formed the link between Egypt and Greece, whose architecture was to become one of the main glories of the ancient world.

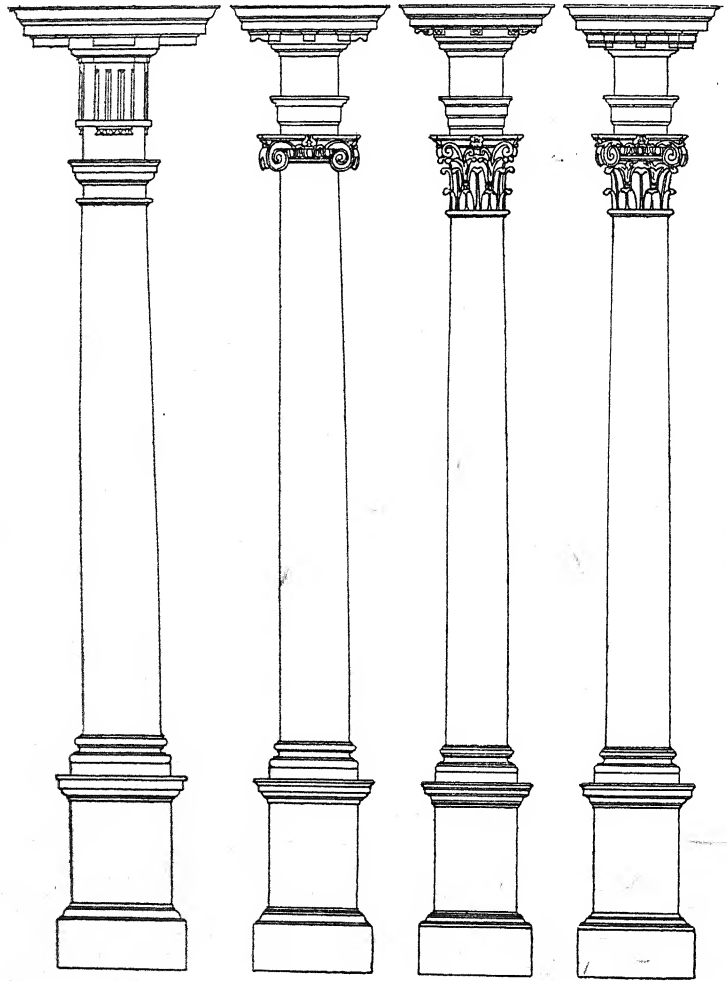
Perfection, purity and refinement were the great qualities of Greek architecture and sculpture, and ancient Greece is still the standard by which such qualities are judged. Most Greek buildings were quite simple "post and beam" structures, and the type was set by the colonnaded temple—originally a roof carried on wooden posts to shelter the unburnt brick walls of the "cella" within.

This form translated into stone and marble, and gradually perfected, reached extraordinary heights of refinement. The temple stood upon a stepped base, which was ever so slightly cambered, as were the beam and eaves (entablature) over the colonnade, in order to correct optical illusion. Each column leaned very slightly towards the centre of the building, and was not only tapered, but had a delicate "entasis" (an imperceptible barrel or cigar shape) so that it should not appear hollow. At the corners of the building the spacing of columns was slightly reduced, and even the slopes of the low gables or "pediments" were faintly cambered. These refinements have been discovered by careful measurement and bear little resemblance to the vulgar bulbousness of some modern columns, which is more of a mannerism than a science. Together with a high standard of workmanship, beautiful proportions and first-class materials, they made Greek architecture a synonym for grace and perfection, while the effect was heightened by magnificent sculpture.

The arch seems to have been known to the Greeks, but was not considered worthy of development. Their columns were of two types, each with its appropriate entablature. The sturdy "Doric" originated on the mainland, while the more elegant voluted "Ionic" originated, as we have seen, in the colonies of Asia Minor. The two types were—generally speaking—not mixed in one building, and not till the decline of Greek architecture in the fourth century B.C. was a third type of column added. This was the "Corinthian," possibly developed from designs in metal, for Corinthian bronze had a fine reputation.

Only a century later the star of Rome was already rising to eclipse that of Greece. To quote H. G. Wells, "in 390 B.C. Rome was a miserable little city on the borders of Etruria, being sacked by the Gauls, in 275 B.C. she was ruling and unifying all Italy from the Arno to the Straits of Messina." She soon came into touch with Greece (particularly the Greek colonies of Sicily and Southern Italy) from whom she borrowed the column, and with the Near East, whence came the arch, the vault, and construction with concrete. Roman architecture was at once more ambitious and more florid than Greek—more magnificent and more vulgar. Arched façades were adorned with colonnades used as a sumptuous applied ornament. Complex interiors were vaulted by fine feats of engineering, any lack of taste being compensated for by magnificent vitality. Columns, together with their bases and entablatures, were reduced to rule as the famous "five orders." These consisted of (1) an emasculated version of the Greek Doric column, (2) a modified Ionic, (3) the Corinthian (the favourite and finest Roman "order"), (4) the Composite (a combination of Corinthian and Ionic), and (5) the Tuscan (a simplified and unfluted Doric supposed to originate from Etruscan models). Actually the

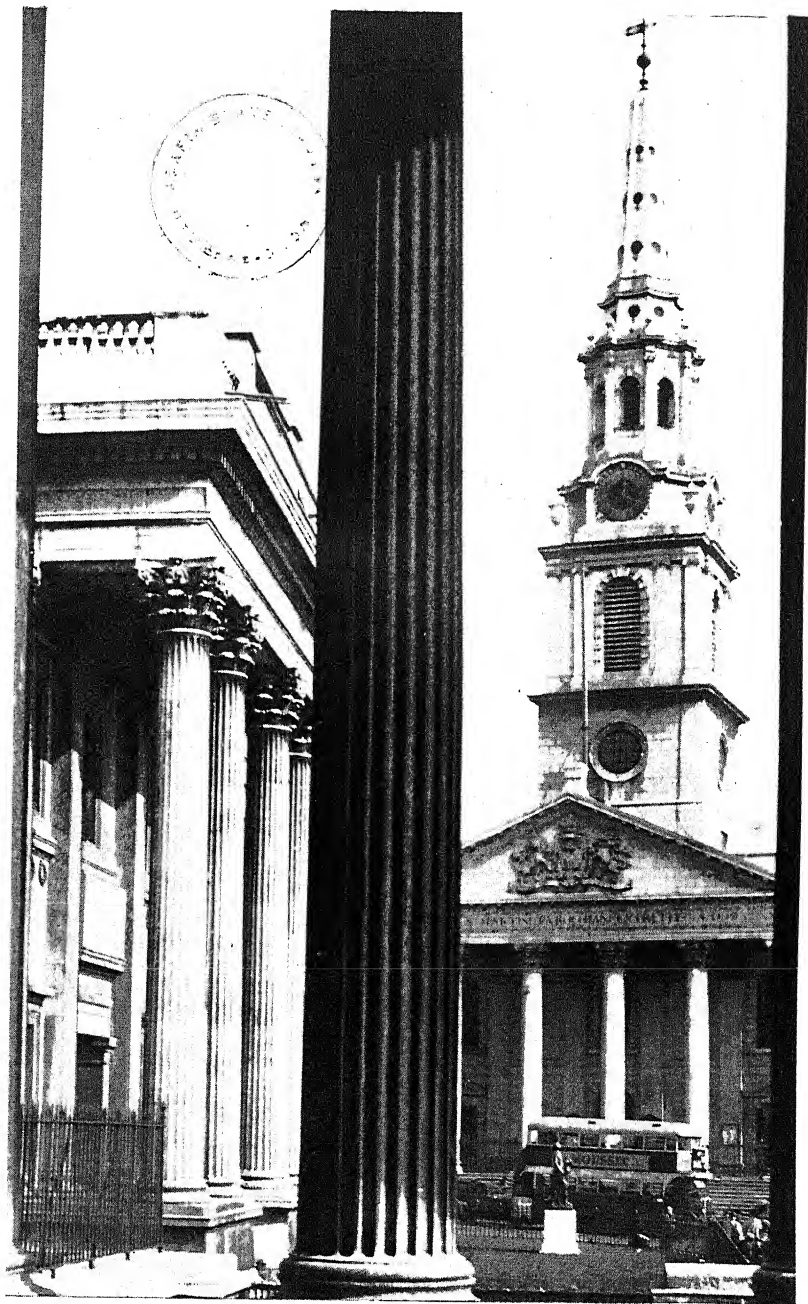
Tuscan was usually put first, and it was theoretically possible to decorate a building of five storeys with the five orders, Tuscan at the bottom and Composite at the top. It was left for the Early



1 2 3 4
The Classical Orders of Architecture: 1. Roman Doric; 2. Ionic;
3. Corinthian; and 4. Composite. Redrawn after James Gibbs.

Renaissance to put this horrid theory into practice, the Romans seldom using more than three orders in one building, even on the largest scale.

It is in Roman times that Britain first comes into the picture. Her culture was still extremely primitive, and until she became a



4 ST. MARTIN-IN-THE-FIELDS, LONDON. 1721-1726. James Gibbs, *architect*. From the Portico of the NATIONAL GALLERY. 1778-1839. William Wilkins, *architect*.



5 LONDON UNIVERSITY, Bloomsbury. 1936-1939. Sir Charles Holden, architect.

Roman province, her monuments were limited to earthworks and megalithic remains such as the great temple at Stonehenge, probably dating from about the eighteenth century B.C. Beyond the fact that it was the temple of some primitive religion connected with sun worship, little can be said here about Stonehenge, which is the finest of innumerable stone circles in this country. Pre-Roman earthworks are often misleadingly called "castles" or "camps." They appear to have been protected settlements rather than places for emergency refuge. Their banks and dry moats were often immense (Maiden "Castle" rises to 60 feet and Old Sarum to over 100 feet), and we may imagine them to have been crowned by palisades of timber and perhaps by thorn thickets. Their entrances were cunningly contrived to meander between protecting outworks—a system revived in the later mediæval fortifications. Where the nature of the soil made earth banks impossible—but seldom elsewhere—rough stone walls might be constructed, as at Worlbury (Westonsuper-Mare). Other well-known examples of these earthworks occur at Cissbury near Worthing, and Blackbury "Castle," Devon. Excavations at Maiden "Castle," Dorset, have exposed the hut circles of a considerable settlement which was taken by assault by the Romans, who, following their usual practice, transferred their town to Dorchester on the plain below. The site was not, however, completely vacated, remains of a Roman temple having been discovered.

The architectural remains of prehistoric Britain are therefore only covered by a very wide interpretation of the term, but with the occupation of the country by Roman legions in the opening years of the Christian era came comparative civilization. For the next four hundred years this distant outpost of the empire echoed—however imperfectly—the architecture of Rome, as we may see by the many traces still remaining. These Romano-British remains are largely confined to foundations and fragments, but there is sufficient to stir the imagination. There are remains of fortresses such as Caerleon, South Wales; cities such as Uriconium, Salop, and Verulamium, St. Albans; the impressive ruins of Hadrian's Wall (6) and its ancillary works; fragments such as the Roman baths at Bath, and the city gate at Lincoln; villas such as those at Brading, Isle of Wight; Bignor, Sussex; Horkstow, Lincolnshire; and Chedworth, Cotswolds. From these remains it is evident that Roman culture was widespread, even in this distant corner of empire. It is difficult to judge what standard of design was achieved, though at Uriconium is an incomplete inscription from the "forum," or public square, which is one of the finest examples of lettering produced by any age. Generally speaking, the architectural details would appear to have been somewhat rough and ready, though important buildings were constructed of stone with colonnades. Lesser structures were timber framed, rather after the fashion of

Elizabethan half-timber work, and were covered with low-pitched roofs, having generously projecting eaves. The roof covering was either stone "slates" hung cornerwise, or "Roman" tiles which were flat, trough-shaped, clay tiles, the joints covered by a small roll, rather like some of our modern pantiles.

Houses might be similar to the Roman town house, built round one or more courtyards, usually colonnaded, and with all windows facing in. More commonly, however, they were planned as an L, or as one straight block, all the rooms opening from a colonnaded verandah. Even in this climate only one or two rooms appear to have been heated, though the use of open fires of a type which has left no structural trace cannot be entirely excluded. Every large villa and every town had its baths, which were of the type now known as Turkish. They had cold, warm and hot rooms (*frigidarium*, *tepidarium* and *calidarium*) with a small plunge bath in the former. The warm room had its floor raised on little piers, the furnace flue being led under it, while the hot room usually had, in addition, a partial wall lining of clay flue tiles. The floor finish was tile, or more often, mosaic, made up of small stone or marble cubes (*tesserae*), either plain, patterned, or pictorial (7). The very term "Turkish bath" has come down to us by way of the Eastern Roman Empire, where the Roman habit of bathing survived the barbarian influx of the west.

Such conveniences as drains and water pipes were introduced to us by the Romans. Their towns were planned on the "grid-iron" principle, like a nineteenth-century American town; Chester, Gloucester, York, Lincoln, Exeter and Chichester still show some faint traces of Roman planning. The non-military towns such as Silchester, near Reading (excavated and re-covered), had a very open lay-out, which suggests an agricultural rather than an urban economy, such as existed on the Continent. Nevertheless, the tradition of the Roman semi-basement shop, the *taberna*, persisted in the Middle Ages, and gave us our word "tavern." It is probable that this was a reimportation from the Continent, for on the whole it does not seem that Roman building tradition here survived the cataclysm which followed the collapse of the Roman Empire. Even the Roman sites were shunned with a few important exceptions such as London, and Roman ruins were plundered for building materials long after. Roman tiles for instance appear in the tower of St. Albans Cathedral and in the nave of Brixworth Church, Northamptonshire.

Even in Italy the Roman tradition had withered. Long before Rome fell, there had been an increasing infiltration of German "barbarians," which, together with the unsettled times, caused a disastrous lowering of standards, and loss of both culture and technical knowledge. If Rome still held the leadership in culture and learning, it was only because of the abysmal ignorance of the

rest of Europe, now plunged in the Dark Ages in which it was to remain for the next five or six centuries. The real power and spirit of Rome survived in the Eastern Empire, which was more secure. There a freer classic developed, as at Baalbec, and this, under Eastern influence, and guided by Greek craftsmen, eventually developed into Byzantine, so called after the capital, Byzantium (later rechristened Constantinople by Constantine the Great, and now Istambul). From that surviving centre of learning was exerted a powerful indirect influence on the origins of European mediæval art, but that story is too long and complex to be told here.

In England, only a hundred and fifty years after the landing of Hengist and Horsa, came a little band of missionaries under Augustine (A.D. 597), and there followed a brief period of church building under Italian influence in the South-east, of which St. Martin's, Canterbury, survives as an example. The history of this particular building is confused, but it seems probable that it was actually built for Queen Bertha before the advent of Augustine. It is, however, typical of the period.

As Roman Christianity spread, it came into conflict with Celtic Christianity, which had already won the North. Finally in 664 at the Synod of Whitby, the Roman Church proved victorious, thus bringing English church architecture under the influence of Rome. A second period of church building followed in the North, of which there are considerable remains at Monkswearmouth, Hexham and Jarrow. The masons came from Gaul, as the Saxons were hardly equal to building in stone, even in so primitive a manner. The crypt at Hexham, with its staircases planned for pilgrims to pass the shrine without congestion, is particularly interesting, and may be compared with that at Repton, Derbyshire (8) and the later (early Norman) crypts at Lastingham, Yorkshire, and Berkswell, near Coventry. In these Saxon churches the work is very crude. The masons preferred to bridge their window openings with a single stone shaped like an arch, or—if that were impossible—to use two stones tilted like a gable end. The true arch was too difficult for them. Even the chancel opening was a mere doorway, and windows were tiny. The interiors were probably covered with rough paintings, as at Monkswearmouth and Jarrow.

There is a very complete example of an unspoilt Saxon church at Bradford-on-Avon, Wiltshire, which falls rather between the Southern and Northern building periods in date. Celtic influence is apparent in the square east end, in contrast to the apsed ends of the churches built under Roman influence. St. Pancras, Canterbury, for instance was very similar in plan, but had an apse. The evolution of early church plans is in fact an interesting and complicated subject, worthy of a large book. The following brief summary will help to an understanding of general tendencies.

When Christianity was first faced with the problem of forming a Church organization, ideas were borrowed from many sources. Existing temples were frequently taken over, and the arrangement of the sanctuary and altar, as well as the service of the priest, owe a good deal to older and pagan religions, while later, Egyptian mysticism was to play a big part in founding the monastic tradition of saintly withdrawal from mundane affairs. The chief model for the church itself, however, was the Roman law court or Basilica—a colonnaded hall, usually having apsed ends. In the West the "Basilican" church, usually aisled, became the paramount early type. In this country, foundations of a small church of this sort were traced in the Romano-British town of Silchester, while a late Saxon example may still be seen at Brixworth, Northamptonshire. Most of the Canterbury churches were also of this type. Another source of inspiration was the Roman house, and from it would appear to have derived the fore-court or *atrium*, and other parts of the precincts usual in early churches, though they are not to be found in this country. The *scholæ*, or Guild houses, and other small domical buildings of the Roman period influenced development in the Eastern Empire, which in turn influenced the "Byzantesque" churches of Venice and Northern Italy, and produced the "cross" church with its transepts and central tower, destined to become the master type of the earlier Middle Ages. Finally, the catacombs and hiding places of the persecuted Christians preserved for many centuries a tradition of crypt chapels, such as those mentioned at Hexham and Repton (8), and the magnificent crypts of the early mediæval cathedrals.

To return to Saxon England. A third period of church building occurred in the tenth century, and it is to this period that most of our remaining examples belong. Its distinguishing features are double tower windows, "long and short" work and a pattern suggestive of half timber, in raised stonework. Tower windows are divided by rude stone balusters, roughly turned on a lathe. "Long and short" work consists of long corner or quoin stones bonded by being laid so that the long and short faces of alternate stones are exposed. The "half timber" surface patterning referred to is best exemplified in the tower of Earls Barton Church, Northamptonshire (9), and can be traced back to the applied colonnade of Ancient Rome, of which it is a sadly debased descendant. Brixworth, Northamptonshire; St. Michael's, Oxford; and Holy Trinity, Colchester, also belong to this period.

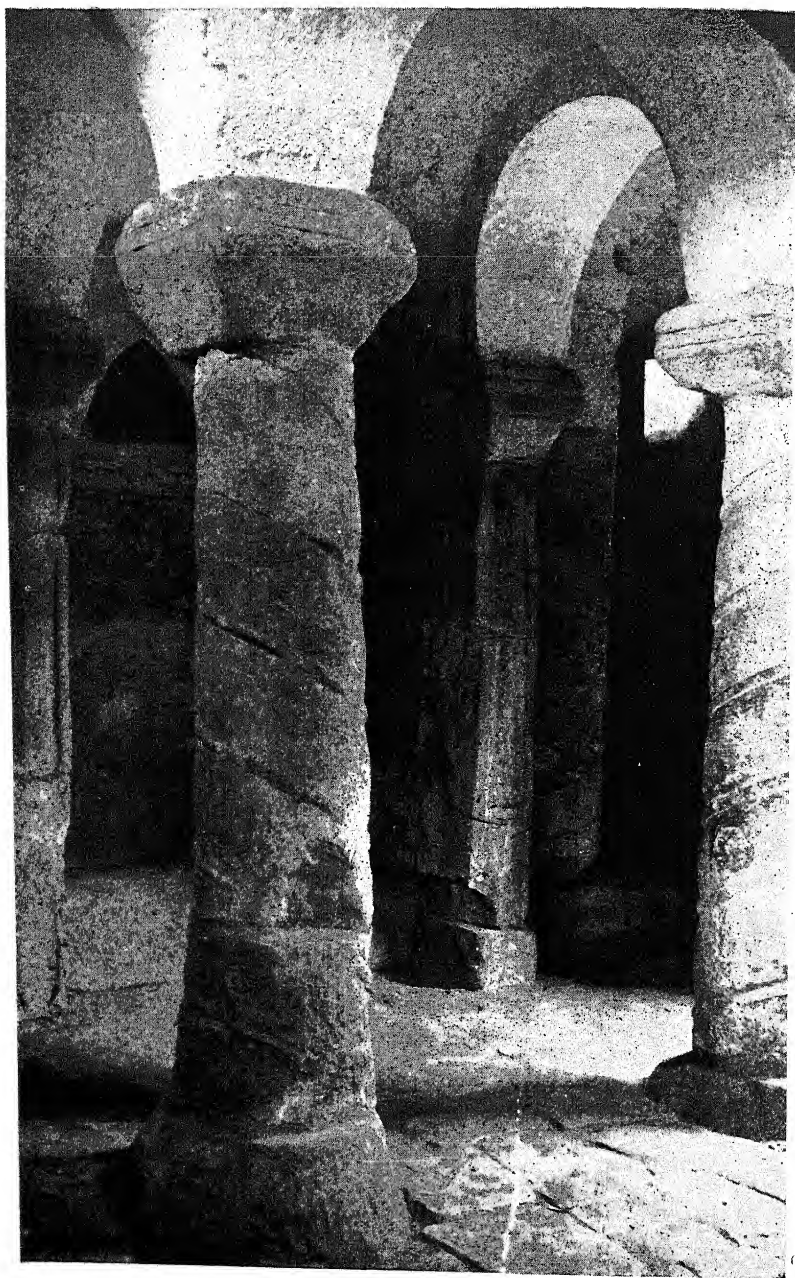
Another feature traditionally associated with the late Saxon period is "herringbone" work, consisting of stone courses in which thin stones on edge are inclined first one way and then another, in alternate courses. Recent research suggests that this feature is more frequent in early Norman work (e.g. Tamworth



6 HADRIAN'S WALL AT HOUSESTEADS, Northumberland. 122-208 A.D.



7 ROMAN MOSAIC PAVEMENT, YORK. Third Century A.D.



8 SAXON CRYPT, REPTON, Derbyshire. Late Seventh Century.

Castle). Before leaving the subject of Saxon church planning, one other point should be mentioned. The priest always faced east, but at first he also faced the congregation, so that the altar stood at the west end of the church. Later the altar was moved to the east end, and the priest turned his back on the congregation. At St. Martin's, Canterbury, therefore, the first apse was at the west end—a rarity of some interest.

No doubt many churches of these early times were built of timber, but only one example survives—at Greenstead-juxta-Ongar, Essex—built of vertical logs squared on the inside only (10). The Saxon house must also have been a timber structure whenever it was more than a mere hovel. The very term “Timbrian,” meaning to build, suggests that wood was the usual material. Already houses would appear to have been of three main types, as they were throughout the mediæval period. At the lowest end of the scale was the circular or oblong hovel of turf, bracken or heather on a rough framework of sticks. This is the type of dwelling used by many primitive people, and still occasionally to be discovered in use as a charcoal-burner's hut. It is the sort of structure which capped the hut circles of prehistoric times, and which was translated into rough stonework in Scotland and Ireland. It survived in use for many centuries among the very poor, and served as a “summer” house for those who moved out with their flocks to summer pastures. The second type of house was that built on “forks” spaced in bays measuring 15 or 16 feet, with a span up to 15 feet. The bay was sufficient to house a double yoke of oxen, the half bay housing a yoke of two oxen. No existing examples can be claimed with any certainty as earlier than the fourteenth century, but the type is an ancient one, dating back possibly to late Roman times. The nominal bay still survives in the measurement of one rod, pole or perch (16 feet 6 inches), and the holding of the owner was related to the number of bays of his house, six acres to every bay. Mr. Addy* has also traced our monetary system of pounds, shillings and pence to this same standard of the bay and half bay, with its equivalent land holding. How far the system was introduced from the Continent, and how far it already existed in Saxon times, must be a matter for much more lengthy arguments than can be indulged in in this short work, but the subject is as significant as it is interesting. Certainly a man's obligations to the community were related to the bays of his house, and he paid tax accordingly. Loss of civil rights seems to have been accompanied by the burning of the offender's house, which symbolically represented them, and was undoubtedly the basis of the economic system. Forks were also called “crucks” or “syles,” and the end, or “gavel forks,” gave us our term “gable.”

* S. O. Addy: *The Evolution of the English House.*

The third type of house was the hall of the governing classes. We may consider the ideal type of its Saxon variety to have been a large aisled timber hall, the bays still being 15 to 16 feet in width. It sheltered the thane, his family, servants and livestock under one roof, for the habit of living with one's animals lingered for many centuries, and not until at least the seventeenth century was the poor man separated from his pigs and his poultry. In Ireland the practice survived until recent times. We can imagine the Saxon hall* to have housed the cows in one aisle and the horses in the other, the servants sleeping over them. Smoke from a fire on a central hearth eventually found its way out of the door, though later, small windows—one Saxon term is "eye-hole"—appeared. These were of course unglazed, one in the chancel of Jarrow church being only 6 inches in diameter. Later still, the introduction of "wind doors" made rather larger openings possible. Wooden doors seem to have been almost unknown, their place being taken by wattle hurdles, skins or rough curtains (even in stone churches, which represent Saxon building in its most luxurious form). Cooking would normally be done over a fire outside, no doubt protected by a rough lean-to shelter. Such "outshots" were for domestic use, and would escape tax. They appear throughout the mediæval period, and the term is preserved to this day in its French form of "hors d'œuvre"—literally an "outwork" to the main meal.

The castle does not appear in Saxon times, for it was a Norman importation. The Saxon thane had no need to protect himself from his people, though he built "burhs" or "burgs" in key positions for national defence. These consisted of wooden palisades, usually on top of an earthwork, but traces are scanty. Indeed, apart from a few stone churches, so little remains from the Saxon period that descriptions must be largely conjectural. The Saxon was a great boaster, and contemporary accounts are not always reliable or clear.

* A reconstruction of this type of hall forms the coloured frontispiece of Marjorie and C. H. B. Quennell's *Everyday Life in Anglo-Saxon, Viking and Norman Times*.

THE ELEVENTH CENTURY

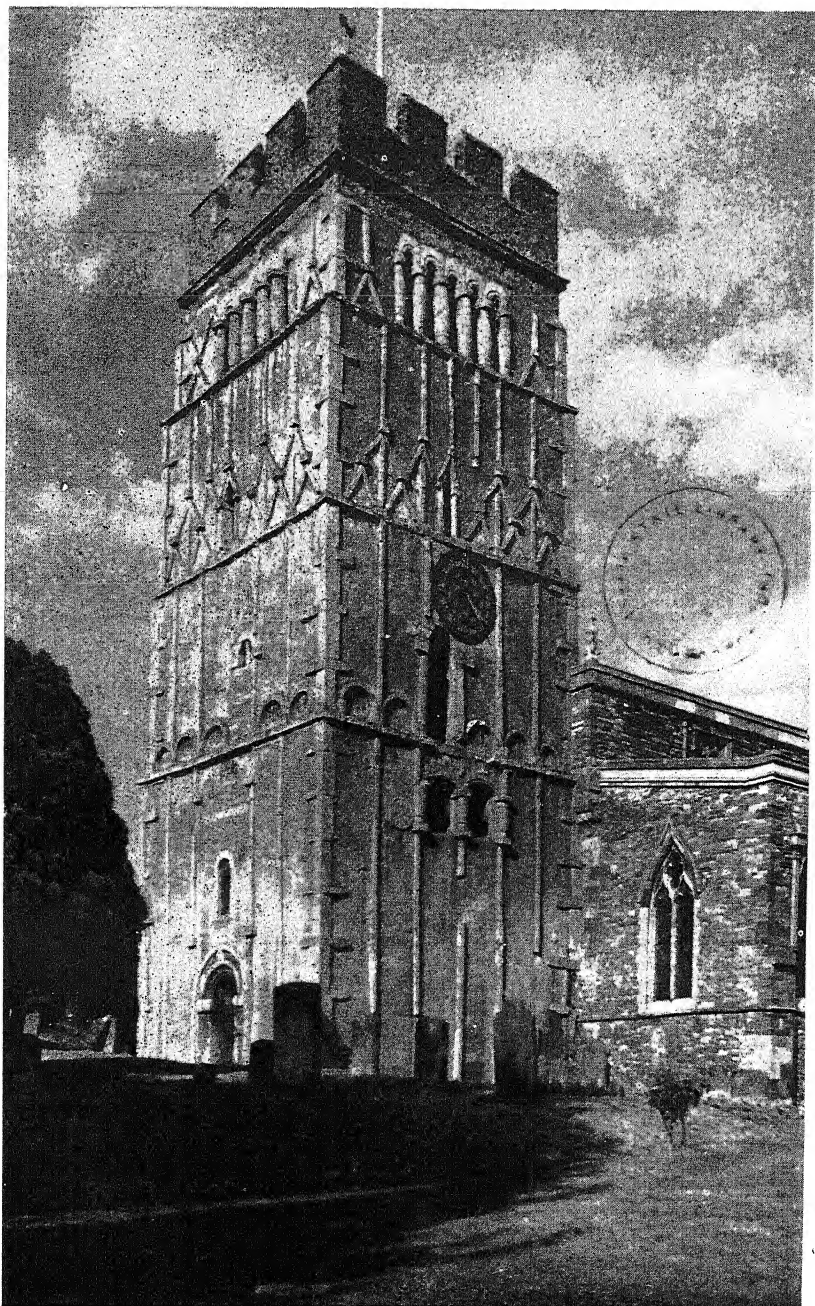
THOUGH it is necessary to divide a book into sections for the sake of manageability and reference, it must not be imagined that the evolution of architecture was anything but continuous, though the tempo might vary considerably. Even the coming of the Norman invasion did not cause a completely clean break, for infiltration of Norman ideas had been going on for the previous half century, and Saxon tradition continued to influence events long after the Conquest. Continental ideas tended to appear first in the South and East, and to spread gradually towards the North and West, first attracting attention in the towns and then in the country. Much the same sequence happened with the introduction of classical design five centuries later, and is happening to-day with the introduction of "Modernism," now largely accepted by the towns—at least in theory—but still unassimilated in the country districts of the North and West. There are, however, many individual exceptions to this sequence. The first castle, for instance, appears to have been built by some Frenchmen in Herefordshire early in the century, though it may be that castles already existed in both Essex and Sussex.

Saxon building has already been described in the previous chapter, and the first half of the eleventh century saw little change apart from the introduction of Norman-French ideas. We shall therefore pass straight on to the period following the Conquest, which was first marked by the hasty construction of earth and timber castles (motte and bailey) at strategic points up and down the country. A few of these were rebuilt in stone as soon as circumstances permitted. Probably most of them remained as timber buildings until the late twelfth or early thirteenth century, and even a hundred years after that the important castle of York had timber defences. Castles normally consisted of a great tower or "donjon" (a corruption from "dominio" later debased into "dungeon") standing on a mound or "motte," and protected by one or more courts called "wards" or "baileys." These towers were usually entered by a door on the first floor, the ground floor being used for storage purposes; they must have afforded very uncomfortable and cramped living places, though stone towers such as that of the Conqueror's Castle in London (significantly known as "The Tower"), and of Colchester Castle, were sometimes comparatively extensive. A slightly more comfortable dwelling was commonly built in the inner bailey against the wall most remote from attack.

This took the form of the usual mediæval hall, but raised to first floor level, both for safety and to secure storage space below. The typical castle plan of the period was rather the shape of a cottage loaf, with the mound filling the smaller shape and the bailey the larger, the entrance normally being remote from the mound. There were, of course, many variations from this basic arrangement, even where the defences consisted only of earthworks and timber stockades. The castle established for purely military purposes, would be compact in plan with a high tower or mound, while the residential castle might have extensive outworks to protect the lord's dependents and their cattle, the mound being lower, and sometimes large enough to hold what then counted as a comfortable dwelling. Stone towers or walls are comparatively rare until the time of Henry II (1154-89).

However, to see Norman architecture at its best we must turn to church work, which offered considerably more scope to the designer, particularly in England, where the newcomers were exploiting their advent to new estates, and where Norman abbeys were being established throughout the country in order to strengthen the hold of the new régime. Norman architecture is the term applied to the Romanesque style current in England and Northern France. The same general style extended throughout France and large parts of Germany and Northern Italy, and owes its name to the fact that it was virtually a recollection of Roman motifs, interpreted to the best of their ability by mediæval masons. Being mainly derived through the masons' guilds of Lombardy, it is sometimes called Lombardic, though this term is better reserved for the Romanesque of Northern Italy. In all cases, the semicircular arch, circular column and Corinthian-type capital are unmistakably Roman in origin, though compared with Roman methods the technical execution was poor and clumsy, and the art of vaulting large spans in stone had been lost.

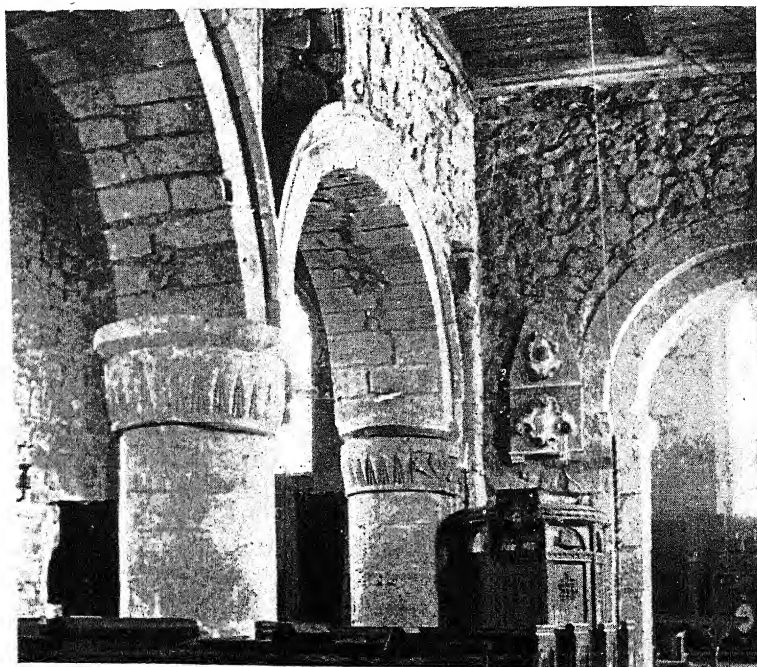
We have seen how the Early Christian basilican church developed. In its largest form it was customarily a plain aisled hall entered through a western porch or "narthex" and with a large apse containing the bishop's throne or "cathedra" (hence of course the term "cathedral"). The altar was set in a low balustraded enclosure, which guarded the sanctuary. By the eleventh century, however, a choir had customarily become interposed between high altar and nave, the latter having its own altar, as the eastern limb of the church was not normally accessible to the laity. Also, owing indirectly to Eastern influence, the large church almost invariably had transepts and became a "cross" or "cruciform" church. It might even have double transepts as at Canterbury, though this was a rather later development. The east end took the form of either one large and two small apses terminating the choir and aisles



9 THE SAXON TOWER, EARL'S BARTON CHURCH, Northamptonshire. Tenth Century.



10 SAXON TIMBERING in the Nave Wall, GREENSTEAD-JUXTA-ONGAR Essex. *Ca. 1011.*
(The dormers are later.)



11 NORMAN NAVE ARCADE, CORLEY CHURCH, Warwickshire. Eleventh Century.

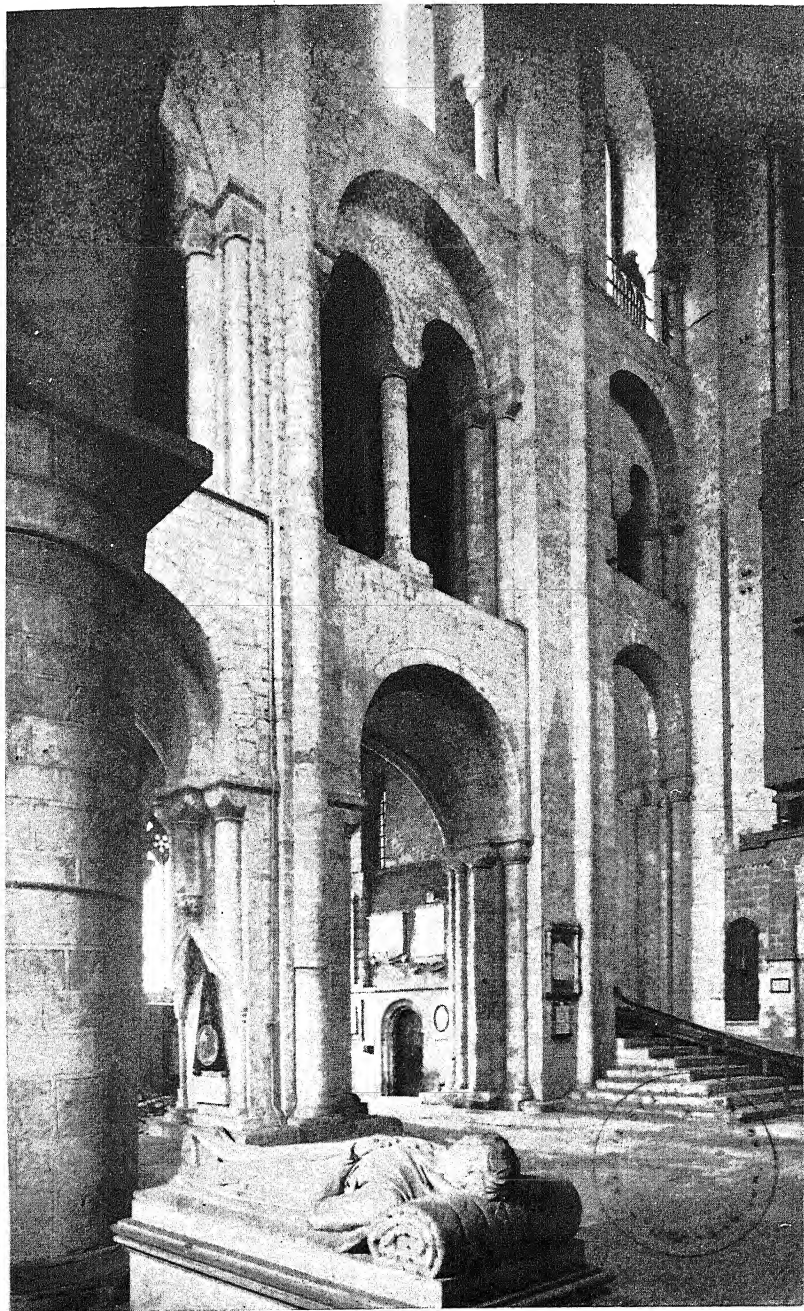
respectively, or the aisles might be carried round the choir apse, and have a series of small apsed chapels radiating from them (see pp. 23, 33). This last form was the forerunner of the French "chevet," a beautiful and complicated east end, which the English masons avoided partly from dislike, and partly no doubt from lack of the technical knowledge necessary for its construction. Most Norman eastern limbs were short and few escaped later extension—Norwich is the famous exception. Hereford, Durham, Peterborough, and Exeter cathedrals originally had three apses; Canterbury and Norwich had the aisled apse with its "peri-apsidal" chapels.

The principal problem confronting church designers all over Europe at this time was that of vaulting the main spans of their buildings; their natural wish to achieve this for the sake of strength and permanence being equalled by their fear of fire. Such a problem would have presented no difficulties in the days of Rome, but the necessary knowledge had disappeared during the Dark Ages, and had now to be laboriously won back by trial and error. In the East the solution had been to use the dome, but even here the sixth century church of St. Sophia, Constantinople, represented the greatest triumph of church building, and later efforts were hardly comparable. Aisle vaults were easy, for there was no great span and plenty of abutment, but the main or "high" vaults were a different matter. In south-eastern France success was at last achieved by using a series of domes on arches, as at Périgueux and Angoulême, but not until well into the following century. At Issoire and Poitiers barrel vaults were used, giving a rather heavy "railway-tunnel" effect (they had to be low so as not to thrust out the walls). In Burgundy barrel vaults were again used, but pointed to reduce the thrust. Even so, many have since collapsed. At Tournus occurs the curiosity of transverse barrel vaults carried on arches, rather like a railway viaduct. Yet all these solutions were behind the Norman school, which was experimenting with the cross vault, technically known as the "quadripartite." This is virtually two half-round tunnel vaults intersecting at right angles, and if quite plain is a "groined" vault. The Normans later found it easier to build moulded ribs on the line of intersection, which helped to support the work during construction, made it far stronger and less liable to collapse and incidentally looked quite decorative afterwards. Their main difficulty was that such a vault could only be erected on a square or nearly square shape, but this was overcome by making the nave roughly twice the width of the aisles, so that two bays of the aisle vault corresponded with one of the nave or choir. Every second pier then carried both nave and aisle vault. Boxgrove Priory choir is a very successful example of this arrangement in the thirteenth century. The necessity for this was later overcome by using the pointed arch, which enabled vaults to be constructed over

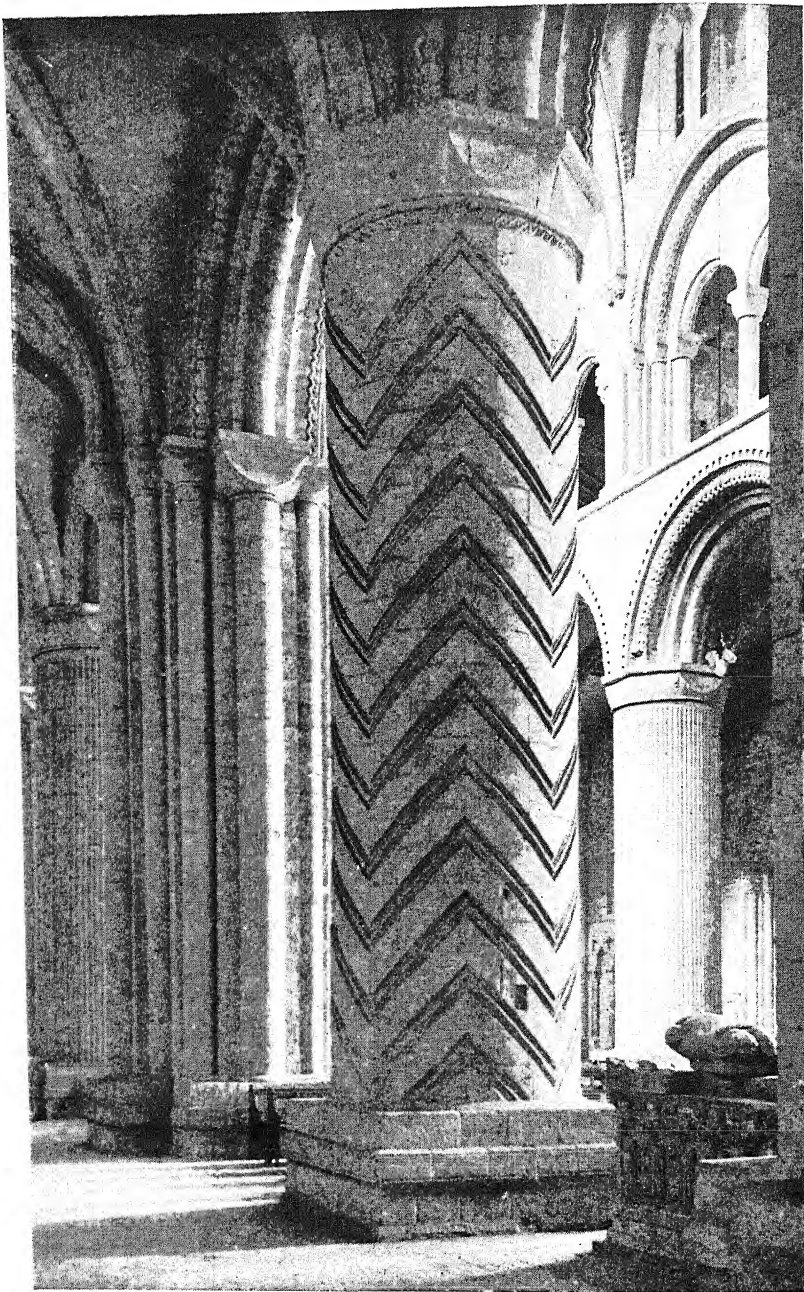
oblong spaces and had the added advantage of causing less outward thrust—but that is a later story.

The Normans working on these lines were the first to construct satisfactorily a high vault of stone, and in view of the building activity then going on in their new province, it is perhaps not surprising that the very first high vault actually built was in England—over the choir of Durham Cathedral. As this was completed in 1104 A.D. it belongs properly to the next chapter, but much of the preliminary work must have been done in the eleventh century. This vault no longer exists, but the nave retains its original vault completed in 1133, by which time both Normandy and Lombardy had produced examples of a similar type.

In style, this Norman architecture still reflected the classical ideal of a static composition of masses. It had, however, forgotten the art of lightness and grace sufficiently long to find a virtue in massiveness. It was an expanding and vital art, and its crude carvings gave just the right touch of vigorous richness to serve as a foil to the heavy masonry behind, accentuating key points such as doorways, and punctuating the main mass. Norman buildings are nothing if not monumental. Durham Cathedral, for instance, is a veritable cliff, and that, despite the two hundred tons of stone hacked off its exterior by Wyatt in his early nineteenth-century restoration. There is something Egyptian in the mystery of its great columns and cavernous triforium (13). If lack of science necessitated so heavy a mass, the Norman artist revelled in it, and made it express to perfection the vigorous ruggedness of his race, which was not without barbaric elegance. Never again did the designer have the opportunity of handling such ponderous masses or monumental enrichment, and standing amongst the giant cylinders of its interior we can forget even the supreme graces of the thirteenth century.



12 NORTH TRANSEPT, WINCHESTER CATHEDRAL, Hampshire. Late Eleventh and Early Twelfth Century,



13 THE NAVE, DURHAM CATHEDRAL. Early Twelfth Century.

THE TWELFTH CENTURY

NOT only did the twelfth century see the completion of Durham high vaults and the bringing to fruition of a vast building programme of large and small churches; it was destined to see the changes and experiments which resulted in the birth of the Gothic style.

The ruling class was composed mainly of Normans, with English estates, whose native language was Norman French, just as the language of the Church was Latin. Indeed French and Latin were the languages of culture and learning for another three centuries. Yet in spite of this, local influence began to be felt, and English Gothic was born with an unmistakably native accent.

At the beginning of the century mass and stability were still the aim of the designer, and the Norman style was at its height. England was pre-eminent in architecture as at no other period of her history. Cluny, the largest church in Western Europe, had an area of roughly 54,000 square feet, while the Abbaye-aux-Hommes at Caen covered less than 30,000 square feet. Yet the Norman cathedrals of Winchester and Old St. Paul's each occupied about 65,000, and Bury St. Edmunds Abbey 68,000 square feet. The great English cathedrals and abbeys compared with anything the Continent had to show, and the volume of building was truly astonishing. Mr. Francis Bond gives a list of greater churches still existing, comprising thirty-seven originally under Benedictine rule, twenty-five under Augustinian, eighteen under other Orders, and fourteen governed by secular Canons. To these must be added such vanished great churches as Coventry, Cirencester and Leicester. All were built within a century, in addition to smaller churches constructed in nearly every parish, and that by a population estimated at little over two millions.

Most of the English bishops, unlike those of the Continent, used monastic churches for their cathedrals, a factor which had considerable influence on cathedral planning. For instance, English cathedrals were long and low, for each comprised, in effect, two churches, one for laity in the nave, and one for monks in the eastern limb. The ubiquity of the Norman monks is reflected in the general uniformity of style, and local diversity is less noticeable than at any other period of the Middle Ages.

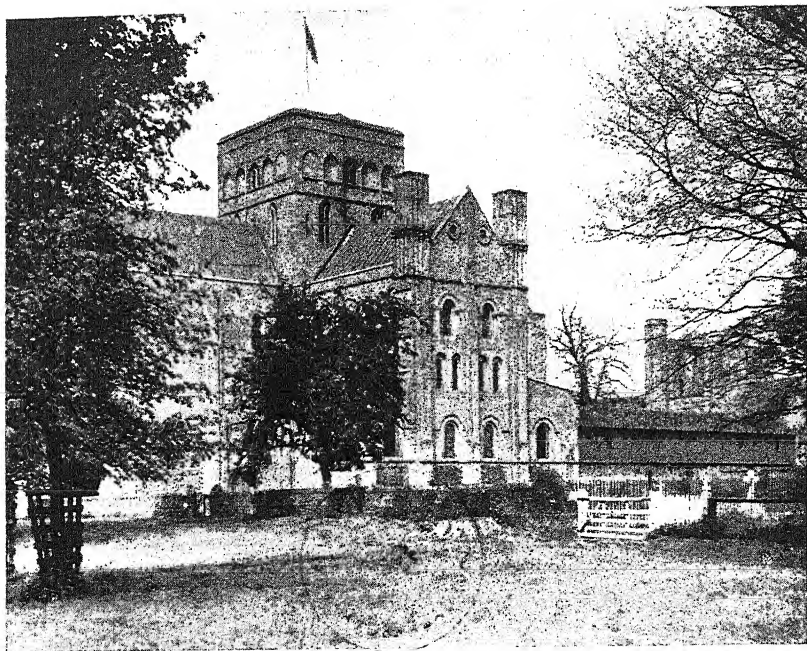
Durham was advanced not only in the early date of its vaulting, but in the method of supporting it. A stone vault exerts a very great outward pressure—indeed collapses were frequent in the

Middle Ages—and the problem of safely transmitting such outward thrusts to the ground was an ever present one. At Durham the choir vaults were abutted with arches built in the “triforium” or “blind storey” immediately under the aisle roof, while the nave actually had “flying buttresses,” though these were still hidden below the aisle roofs.

Thus, by the opening years of the twelfth century the general form of structure of the great church was already evolved, and was to remain the pre-eminent type for some centuries. Cruciform in plan and partly or wholly aisled, this type had a central tower (at first low) carried on the great arches of the “crossing.” These arches were abutted by the nave, choir and transepts, whose arcades buttressed the tower arches at one end, and were themselves stopped and abutted by walls, towers or buttresses at their outer ends. In section the nave arcade (the arcade between nave and aisle) coincided in height with the aisles, and was surmounted by a “triforium” or “blind storey” corresponding in height to the slope of the aisle roof, above which rose the “clerestory” or “clear storey,” the windows of which lit the nave (or choir). The thrust of the main vaults was diverted downwards as far as possible by the weight of heavy pinnacles, and transmitted to the aisle buttresses by arched or “flying” buttresses, a second pinnacle further diverting the resultant thrust so that it fell within the base of the aisle buttress. Such a building, besides being constructionally logical, lent itself to an equally logical and inspired æsthetic expression.

In the early twelfth century, however, much reliance was still based on mere mass, and the system of abutment, later extended so scientifically, as yet existed only in embryo. The triforium was still used for church accommodation, as was the crypt, producing virtually a three-storey church. Its inconvenience was such that as construction advanced and permitted the use of flatter roofs the triforium was gladly reduced in size, or even abolished.

Readers should be warned against the old fallacy, still sometimes met, that mediæval buildings were designed and erected by humble monks or craftsmen, with no technical training, whose fervent religion and honest labours shone forth in the magic which they produced, all collaborating in their labour of love. Even the description, given above, of the form of the greater church should be sufficient to dispel any such fairy story, for the lay-out of such a building is nothing if not scientific. It is true that we have little definite information about individual designers before the fourteenth century, but we know that they existed, and that they were in effect architects, though the term was not then in use. In records they are styled “Master” (*magister*) or just “Masons” (*lathomi* or *cementarii*), or “Carpenters.” In 1538 a “Maister of the Workes” was defined as a deviser of buildings, *architector* or *architectus*, but



14 CHURCH OF ST. CROSS, WINCHESTER. *Ca.* 1160.



15 BERKSWELL CHURCH, Warwickshire. Chancel, early Twelfth Century. Timber Porch, Seventeenth Century.



16 PRIORY CHURCH, LASTINGHAM, Yorkshire, Twelfth Century. (The entrance to the Crypt is modern.)

the "Magister of the Fabric" was the Clerk of Works. It is probable that the master mason (or carpenter) of importance did little or no manual work when he had finished his training. His plans were drawn on boards or vellum, and have rarely survived. Occasionally they might be incised on a wall; examples of this occur at Freiburg and Strasbourg. Simple buildings would have their plans cut direct in the turf—"After the fashion of surveyors . . . marked the turf, making lines on all sides over the surface of the earth, visibly drawing the plan of a building" (Giraldus Cambrensis, twelfth century). Models were in frequent use for important buildings, but here again few have survived. We have no evidence in England to compare with the vellum sketch-book of the thirteenth-century French Master, Villars de Honnecourt, and other relics are equally rare.

In the cloisters of Lincoln Cathedral is the tomb of Richard of Gainsborough (*c.* 1296) and at Crowland Abbey that of William de Wermington (*c.* 1427), both Masters, but apart from these even architects' tombs are unknown. There were, however, meetings of architects such as that recorded at York in 926 and at Canterbury in 1429, and we know that not only were well-known Masters called in as consultants, but that they sometimes collaborated, as did Henry Yevele and Hugh Herland at Westminster Hall in the fourteenth century. Professor Prior considered that it was the usual practice for one Master to control one building only, up to about the fourteenth century. The mason normally took precedence over the carpenter.

One reason for the undoubted popularity of architecture in the Middle Ages seems to have been the comparative freedom afforded for research and speculation, immune from any religious ban. In days when other sciences were hedged about with ecclesiastical prohibitions, this was no mean attraction. Geometry was an important part of the architect's training, useful both for design and setting out. When employed on military works the architect was styled "ingeniator" or engineer. If the designer has not left much trace of his activities, this may be partly due to his chroniclers, who, being monks, naturally preferred to give the credit to Mother Church, and showed more assiduity in recording the names of clerics and donors. When they wrote that Abbot so-and-so built a new church, they meant no more than the gossip writer who records that Lord so-and-so is building a new house; and students who took such statements literally have caused many false impressions.

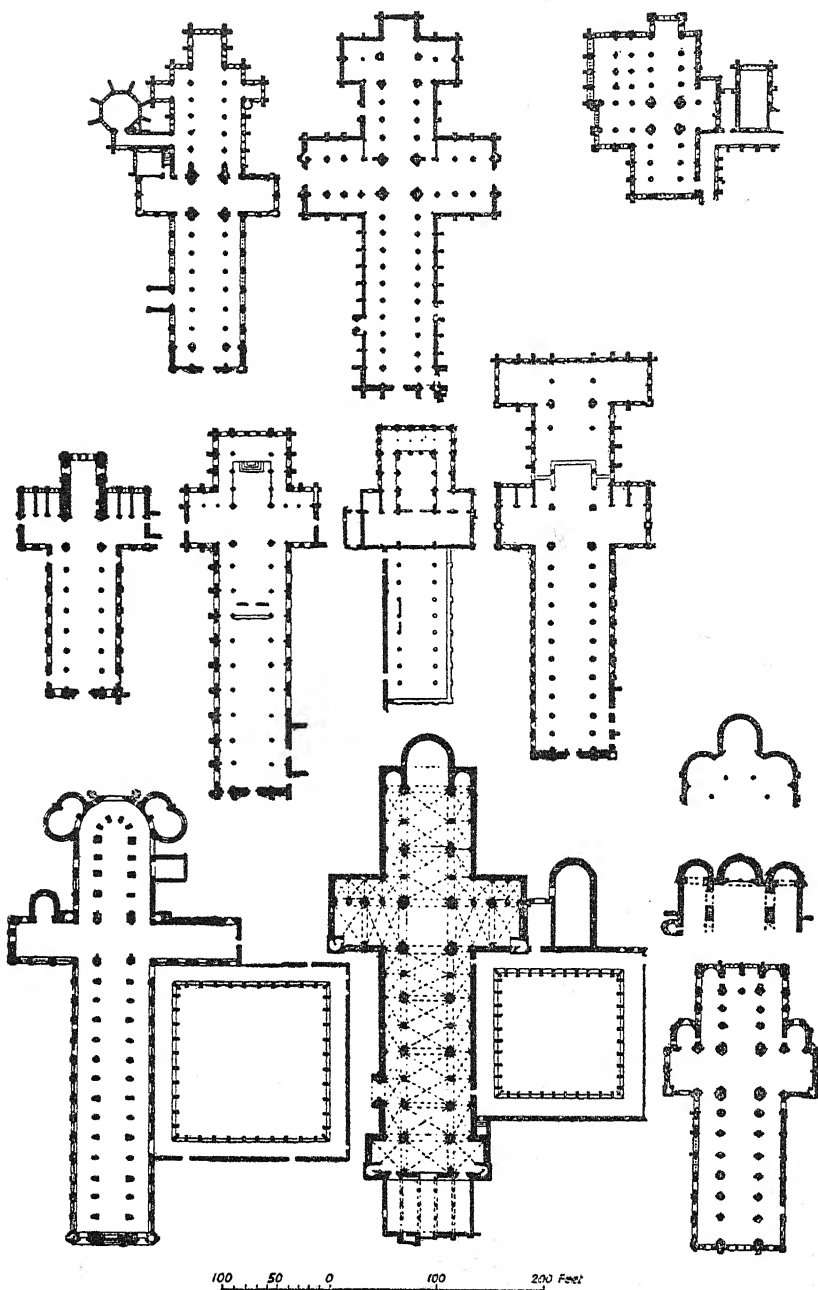
It was, in fact, considered incumbent to ascribe the building of a church to the Abbot "for the glory of the office" (Matthew Paris, thirteenth century). Next in importance would come the Clerk of Works, who acted as business manager, and finally the craftsman

responsible for the actual design. In practice, therefore, mention of the dignitary holding office at the time of building was usual, mention of the Clerk occasional, and of the designer, very rare—at least before the fourteenth century.

Professor Prior has described the work of the eleventh and twelfth centuries as Norman and Monastic, and early in this period the Abbot might indeed take a practical interest in the building of his church; yet by the early thirteenth century the great bishops, who were then mainly responsible for the more important work of the period, were already drifting away from their craftsmen, and there began to emerge the Clerk or middleman who became so important a figure in the fourteenth century. From their ranks came the famous William of Wykeham, made bishop "as one wise in building castles" (if Wyclif's thrust was, indeed, meant for him).

Equally fallacious are many theories of craft work in the Middle Ages. It has frequently been suggested that the period was a golden age, in which men worked for love of their craft and without stint. Needless to say there is no shred of evidence for this legend. When the poor were little more than serfs, it is not to be imagined that they were allowed much freedom in their work, nor that they had any extraordinary love of it. In actual fact craftsmen were admonished that they "should all be true and trustworthy in their office, whether they work by the day or the piece, as many carpenters and masons do. When they labour by the day, they should not stand all the more idle that they may multiply the days at their work. If thou labourest by the piece, then thou shouldest not hasten too soon therefrom that thou mayest be rid of the work as quickly as possible, and that the house may fall down in a year or two" (Berthold of Ratisbon, 1230-72). Similarly a report on the lack of progress at Christ Church, Oxford, at Wolsey's death stated that owing to lack of supervision the men were playing and gambling instead of getting on with their work.

The trade guilds jealously guarded the rights of masters, and kept control over the admission of craftsmen. There is even a recorded instance of an eleventh-century bishop of Utrecht being slain by a Master Mason for attempting to learn the secrets of his craft. The guilds were often founded compulsorily by the municipality for proper control of the crafts, and the prevention of fraud, but they soon found opportunity to obtain a monopoly of their particular business, and sometimes became virtually masters of the corporation. They took good care to preserve the position of the masters, as may be seen from the ordinances of the Blacksmiths (1408), which state that "no one of the trade shall teach his journeyman the secrets of his trade as he would his apprentice." In fourteenth-century Coventry, the harsh conduct of the trade guilds caused much popular discontent, as the masters formed a municipal



Greater Church Plans.

(Top row) Augustinian : Southwell, Beverley, Oxford.

(Second row) Cistercian : Kirkstall, Jervaulx, Abbey Dore, Fountains.

(Bottom row) Benedictine : Norwich, Durham (with early East End), Romsey;
 (above) Chester and Hereford, original apses.

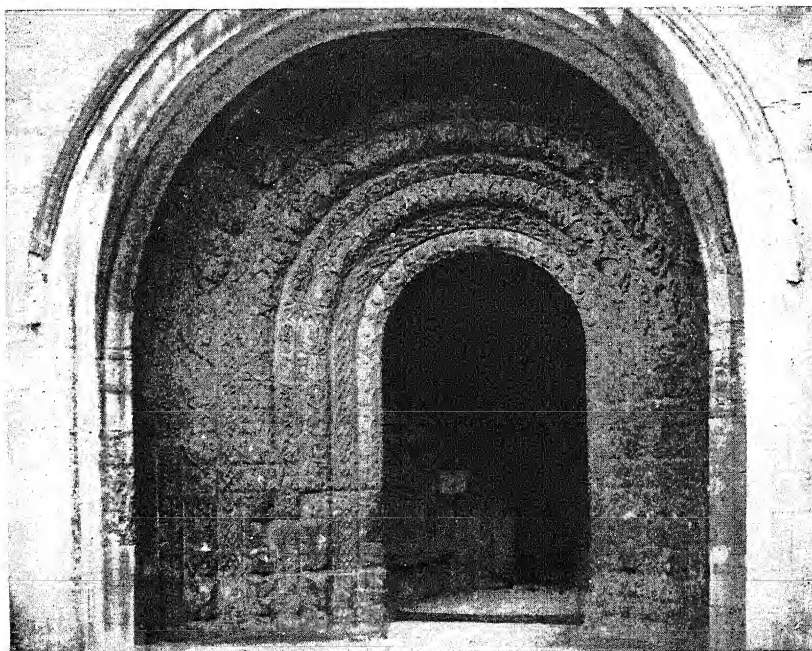
hierarchy dominating the town. One Lawrence Saunders, a person of some position, who endeavoured to become a popular demagogue by opposing this powerful faction, had a stormy career, ending in the Fleet Prison, from which it would appear that he never emerged. Judged from contemporary records, Saunders might be dismissed as a trouble-maker, but the guilds were also indicted by no less a man than Wyclif. "They conspire to support each other, yea, even in the wrong, and by their wit and power oppress other men who are in the right. . . . Also skilled craftsmen, as freemasons and others . . . conspire together that no man practising their craft shall take less payment daily than they have agreed amongst themselves, though his conscience may tell him he should accept much less . . . and that none of them shall do ought than hew stone, though he might profit his master twenty pounds by one day's work by laying stones in mortar on a wall, without harm or hurt to himself."

So much for the background of the mediæval designer and craftsman; we must return to the early twelfth century, where we have already roughly reviewed the progress of the greater church. In smaller churches problems were naturally less complicated, and the work less highly organized. Stone vaulting was rare, and timber and thatch must still have played their part. Details followed the style of the larger buildings where funds permitted, and there was a steady stream of building work all over the country, particularly under the patronage of Mother Church, with her growing wealth and virtual monopoly of culture. Smaller church architecture at its most ambitious is shown in Iffley Church, Oxfordshire, where rich, if primitive, decoration is concentrated against a plain background. Not that this good taste is to be taken for granted as a mediæval conception, for it is probable that these churches were originally painted and ornamented as garishly as is the small Catholic church of Northern France to-day, and the mellow charm of age had yet to be acquired. Even so, the colours, though bright, were doubtless more harmonious, for men had not yet lost the inherent colour sense of a still primitive people.

Walls were still thick, and buttresses, if they occurred, were shallow, or took the form of half columns, as at Berkswell, Warwickshire—a last survival of the attached classical colonnade. Windows were seldom large enough seriously to interrupt the wall surface, though they were heavily splayed and consequently appeared larger inside. The unaisled plan survived, and was doubtless more common originally, aisles having been added at a later period. Examples are innumerable, but one may mention Kilpeck, Herefordshire, and Stewkley, Buckinghamshire, among the more noteworthy. Earlier churches had the conventional apsed east end of Normandy, but under English influence the square end soon began to take its



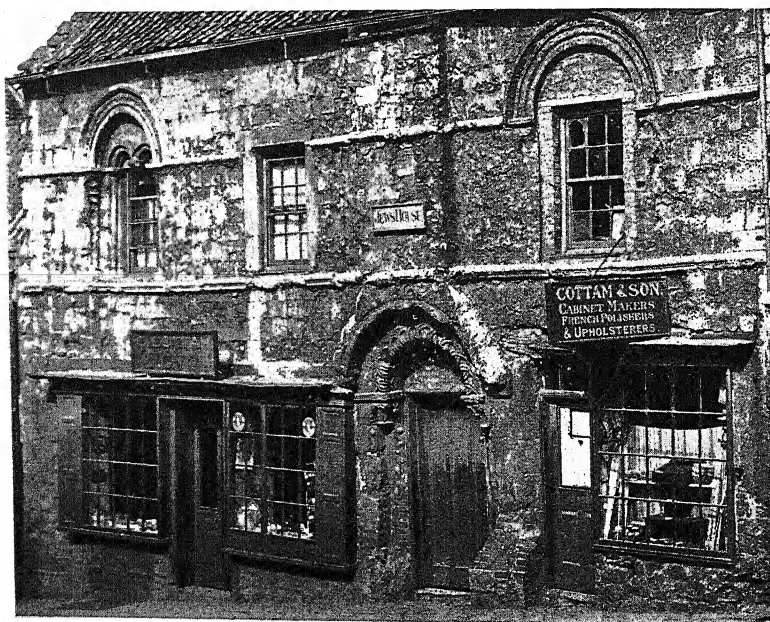
17 FIGURES IN SOUTH PORCH, MALMESBURY ABBEY, Wiltshire. Later Twelfth Century.



18 SOUTH DOORWAY, MALMESBURY ABBEY, Wiltshire. Later Twelfth Century.



19 THE MANOR HOUSE, BOOTHBY PAGNELL, Lincolnshire. *Ca.* 1180. (Ground floor openings and large first floor window later.)



20 THE JEW'S HOUSE, STEEP HILL, LINCOLN. *Ca.* 1150. (Much mutilated.)

place (see pp. 34 and 50). Much of the more primitive work is difficult to date, though some guidance may be obtained from the masonry, which in early work is usually built of nearly cubical stones. Surface is a doubtful guide, as few ancient walls have never been re-worked.

In one respect the Normans had an opportunity infrequently repeated, for they were little tied by earlier work, which was seldom of sufficient importance to be considered. Later, small churches were almost invariably extensions or remodellings of more ancient structures and, charming though the result usually was, the problem of preserving existing portions (and moreover in use) must have been a great irritation to the mediæval designer. Norman doorways have appealed to most ages, and have consequently been preserved even when it was necessary to move them, so that they are not always in their original position. The splendid west door of Kenilworth parish church, for instance, is traditionally supposed to have come from the abbey nearby.

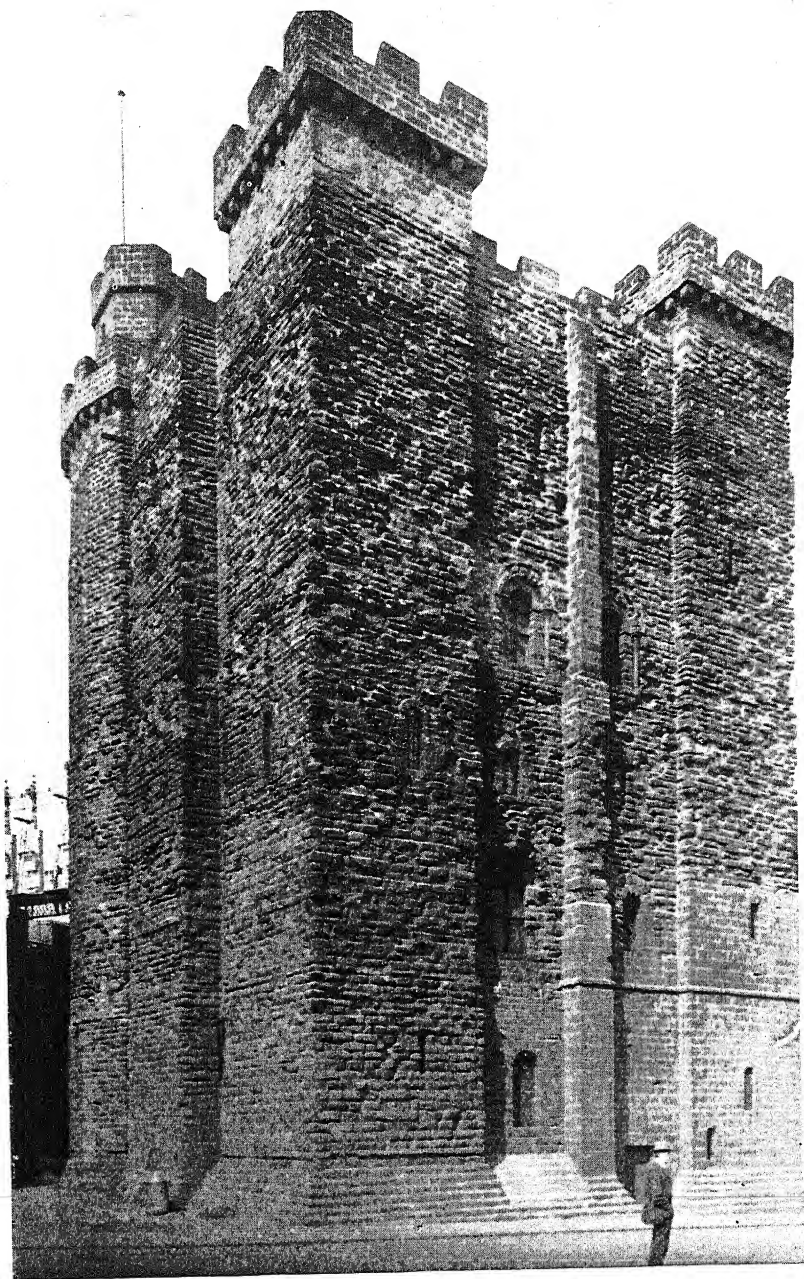
By the middle of the century pure Norman was giving way to a series of transitional experiments which considerably lightened the structure, and introduced the pointed arch. In this movement a great part was played by the Cistercian Order, which by its insistence on simplicity, and its contact in the North with surviving Celtic tradition, did much to influence English church planning. Founded at Cîteaux in 1098, the Order proved so popular that by 1152 the Chapter General tried to forbid the founding of further establishments. The first English foundation was at Waverley, Surrey, in 1128, and the great abbeys of the North—Fountains, Kirkstall, Jervaulx and Rievaulx—were built at a period of architectural development when they were bound to contribute valuable ideas to a fast changing architecture. In planning the Cistercians abandoned the continental apse, and developed the square east end with an ambulatory or processional path behind the high altar, to which they added a "retro-choir" (as at Jervaulx, p. 23), which could be used to house the shrine of a local saint, or even several minor altars if it were extended sideways (as at Fountains) into an eastern transept—a device also adopted by Durham, in its Chapel of the Nine Altars. This type of planning was such an obvious advance on the old cramped east end that everywhere eastern limbs were pulled down and extended, leaving no trace above ground of their original planning. There was also the additional advantage that this English variant did not require the great science necessitated by the French "*chevet*." *Chevet* is a term used for the standard type of plan for the east end in the French, or indeed Continental, Great church. If, as has been suggested, the term thus employed is etymologically open to objection, it is convenient and of established usage. In the central apse an arcade is carried all the way round,

with an ambulatory or passage way next the outer wall giving easy access to a varying number of radiating chapels; examples more or less complete, remain at Westminster, Tewkesbury, Gloucester and Norwich.

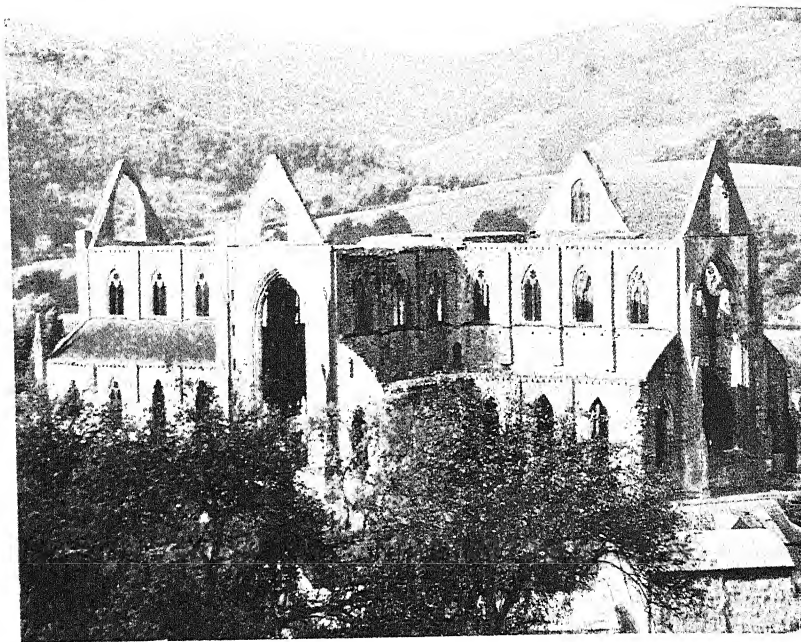
Along with these developments went an improvement in construction, which was becoming lighter and more scientific. The use of the pointed arch, though it still retained the old Norman enrichments, meant less thrust, and a consequent reduction in mass and abutment, while the increasing skill of the masons made greater strength possible with thinner masonry. The old Norman wall relied on a rough filling of rubble and mortar, only the faces being of wrought stone, but walls now began to be built of better stonework and could thus be reduced in thickness. The great cylindrical columns of Norman times began to give way to more slender piers, shaped so that each attached shaft corresponded to a member of the arch or vault supported by it. There is enough stone in one of the Durham cylinders to make a dozen or so thirteenth-century piers. Figure sculpture was at first frowned on by the Cistercians, and this helped forward the development of mouldings from the crude, if effective, rolls of the Norman period.

Towards the end of the century the style we know as Gothic began to appear. It is in some ways a misleading title, derived from the time of the Renaissance, when mediæval architecture was derided as the work of Goths and Vandals. "The spirit of the artist, however, rose against what he thought a Gothick attack," says Boswell, when Dr. Johnson made disparaging remarks to Mr. Gwyn about architecture and sculpture. However the term is so firmly entrenched and generally understood that it is unlikely to be altered now.

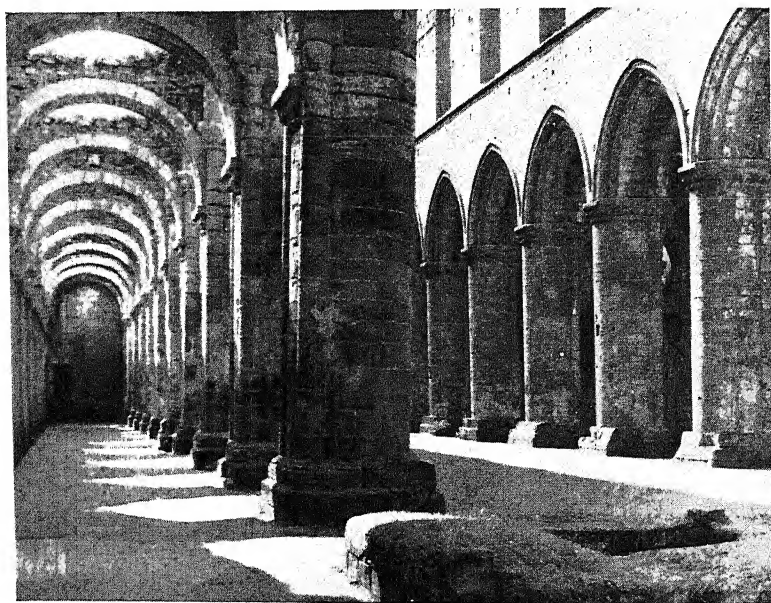
The advent of this misleadingly-named style was uneven. Chartres, perhaps the finest flower of French Gothic, was under construction before the end of the century. Wells Cathedral (26) was substantially under way by the same date, but hardly compared with the great French church, though it was Gothic in detail (27, 28), for it clung conservatively to the thick walls of tradition. Many of the Cistercian abbeys were more Gothic in spirit and lightness of structure, though still using Norman ornament and the round arch. Nor must mention be omitted of the rebuilding of the choir of Canterbury Cathedral—a work of the first importance. "Conrad's glorious choir" had been destroyed by fire in 1174, less than sixty years after its completion, men "cursing God and his saints for the destruction of their church." The new choir, Transitional in style, was designed by a Frenchman, William of Sens, and though the work was completed by William the Englishman after his French namesake had been seriously injured by falling from the scaffold, it is essentially French in conception, using the "chevet"



21 THE CASTLE KEEP, NEWCASTLE-ON-TYNE, Northumberland. Ca. 1171.
(Considerably restored.)



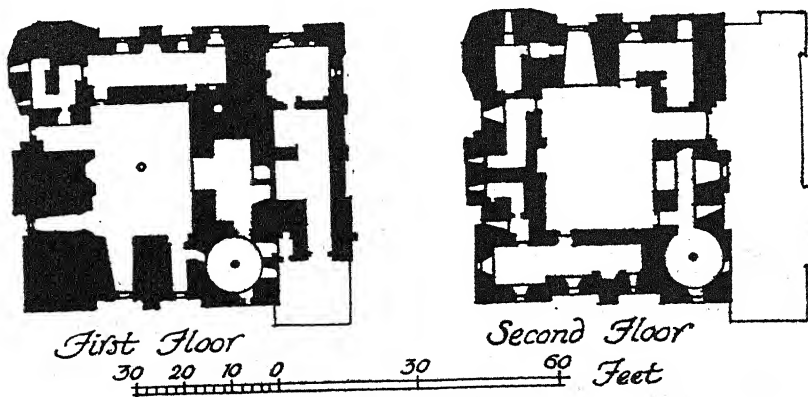
22 TINTERN ABBEY, Monmouthshire. A ruined Cistercian Church of the Thirteenth and Fourteenth Centuries.



23 THE NAVE, FOUNTAINS ABBEY, Yorkshire. Later Twelfth Century.

and the "Corinthianesque" column favoured by France (24) (*v.* p. 43). Both these features were studiously ignored by English master masons, though Canterbury naturally exerted in the South-east an important influence, which reached as far as Lincoln, where a new choir was started before the end of the century. English design already showed signs of local variation between the South-east, South-west, and North-east, which were to become the chief schools of mediæval development. By this time England had long lost its pre-eminence in technical progress. France now took the lead, though rivalry was still keen.

The first Gothic period was descriptively labelled "Lancet" or "Pointed" by nineteenth-century archæologists, and is usually considered to begin with the last decade of the twelfth century. The invention of the pointed arch came about partly from vaulting developments, for it enabled vaults to be constructed more easily over oblong bays, and partly as an expedient to enable arches of different spans to rise to the same height. Another school of

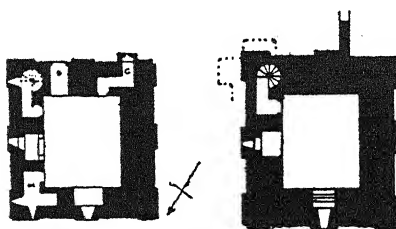


The Castle, Newcastle-on-Tyne.

thought would trace its origin to the East, and we may consider all these theories as possible and even probable, for origins are usually complex and cumulative. All we can say with certainty is that the advantages of the pointed arch were so numerous that it soon ousted the old semicircular form, and held its place until the classic revival.

Beside the vast volume of church building during the twelfth century there was much activity in lay building. The position of castle building is somewhat confused in the first half of the century, many private fortresses springing up in the unsettled times of Stephen. Henry II, however, had unauthorized castles dismantled, and under his direction the defence system was better organized, and timber

buildings began fairly generally to be replaced by stone. Stone defences of earlier date are more rare, though by no means unknown. We have already noted the great towers of London and Colchester in the eleventh century—exceptional both in size and substance. To the earlier twelfth century may be assigned the donjon of Porchester Castle, and several stone curtain walls (i.e. walls enclosing baileys). Then come the fine towers of Newcastle and Castle Rising, Norfolk; Kenilworth and Rochester are other important examples. The late twelfth century saw many of these stone towers erected, usually square as at Ludlow and Richmond, Yorkshire, and sometimes of considerable size, as at Hedingham. The circular tower also occurs and was later elaborated, as in the unusual example of Conisborough, Yorkshire. Yet another type was the “shell” keep,



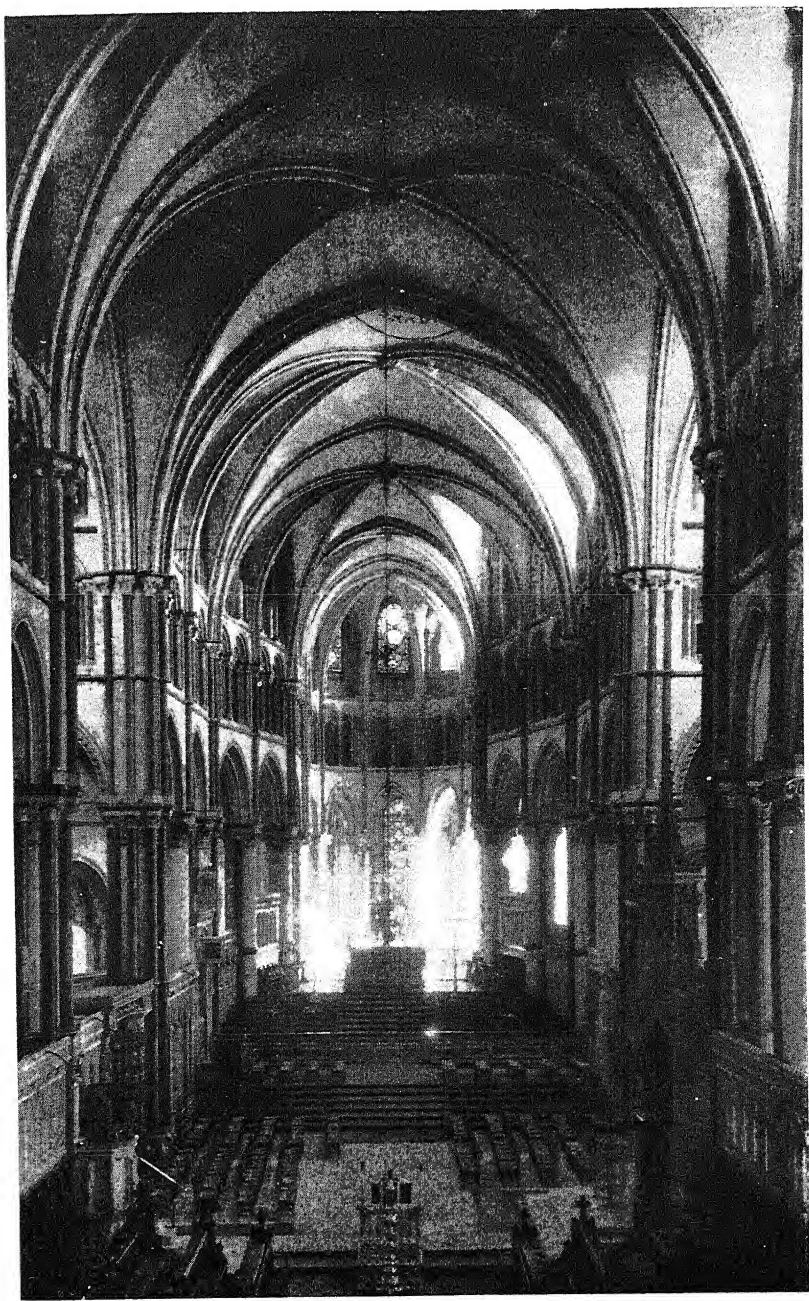
PRINCIPAL FLOOR

GROUND PLAN

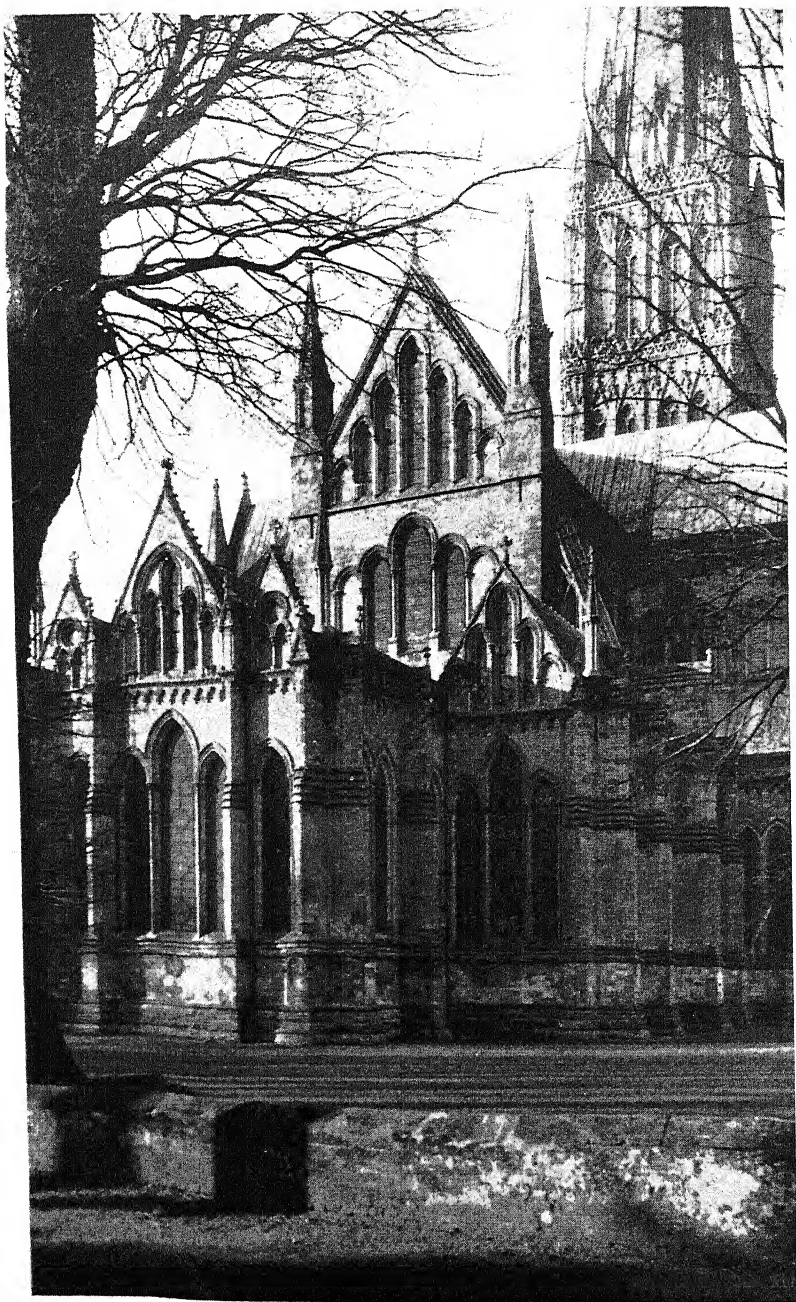
The Peak Castle, Derbyshire.

apparently originating from cases where the mound was too large or too weak to carry a building, but could be encircled by a wall, leaving the interior open except for lean-to structures. Actually the word *keep* is a modern one, though in common use nowadays for the great tower or donjon.

Development was towards the replacing of timber structures by stone, and later to the evolution of shapes not easily assailable by mine or battering ram. The ordinary square angle was particularly vulnerable to attack in this way, the corner stones being prised or pushed out, hence the evolution of circular or polygonal shapes, and the protection of foundations by stone batters and escarpments. There was already a tendency to gain added protection by projecting towers which would permit walls to be covered by flanking fire. The tops of towers and walls were protected by timber galleries—“breteches” or “brattices” projecting over the face, so that the foot of the wall could be enfiladed by fire, or even boiling water or lead melted from the roofs. Stone keeps were approached by external stairs open to fire from the walls, and doors began to be further protected by an iron portcullis. Some wooden domestic buildings in the castle precincts were replaced by stone quite early in the century, as at Oakham, Rutland, and castle chapels occur, as at Ludlow. The elaborate assault towers, catapults and arbalists of the Continent were not so much in evidence in this country, though it is recorded that Henry II set five hundred carpenters to work making “engines” for the reduction of Bungay Castle—an operation that so frightened the garrison that they promptly surrendered. The principal “engines” seem to have been the



24 THE CHOIR, CANTERBURY CATHEDRAL, Kent. 1175-1184.



25 THE EAST END, SALISBURY CATHEDRAL, Wiltshire. 1220-1258. (Spire, *ca.* 1320.)

"mangon," a form of catapult with an arm operated by twisted ropes, and the much more effective "trebuchet" or trip-gate, which was similar but larger, and operated by counterweights. The arbalist was a large fixed horizontal bow hurling heavy darts or lances. The early castle walls were not high enough to stop the stone balls, dead horses and other assorted missiles which such a machine could lob into the courtyard.

Of Norman houses, naturally only the more elaborate have survived, and these are usually of the castle type, with first-floor living accommodation over ground-floor storage. A fine example is the Jew's House at Lincoln, one of two Norman houses still existing on Steep Hill (20). Such a stone house in a city, at this early date, was unusual in England, but the rich Jews had particular need of a house which could not readily be burnt down when a fickle king removed his protection. The Jews of Lincoln held an important position; one of them—Aaron—held the cathedral plate in pawn for seven years. (A still stranger pledge was the town of Blandford in Dorset, held by him as security against a loan to the Earl of Leicester.) These small Norman houses seem to have sheltered communities out of all proportion to their size, and life throughout the Middle Ages must have been extremely uncomfortable. The fact that the privy emptied into one corner of the moat and that drinking water was drawn from another corner seems to have worried nobody, any more than did the smoke, the draughts and the fleas of the mediæval hall.

In towns, experience was, however, forcing some slight improvements. By 1189 special privileges were granted to Londoners who built in stone or tile. As early as 1135 the city had been ravaged by fire from London Bridge to St. Clement Danes, despite the fact that single-storey houses were still the rule and a staircase something of a curiosity.

In the country we may imagine the house on forks and the rough hovel to have been the predominant types. Probably the man who did not live in his lord's household had to be content with a very flimsy structure, as is suggested by the Assize of Clarendon of 1166, which threatened anyone receiving certain heretics with the punishment of having his house carried outside the town and burnt. In such circumstances "house breaking" then had a literal meaning. The great landowner had many houses, for money was still rare, and it was only possible for him to enjoy the benefits of ownership in kind by going to live on each of his estates in turn. Transport was too bad for produce to be collected from any distance, and money did not exist for payment in cash.

THE THIRTEENTH CENTURY

THE first half of the century marks the period of "Lancet" Gothic, of which the greatest example is perhaps Salisbury Cathedral (25), begun during the first quarter of the century. Finding the ancient town of Old Sarum very cramped, Bishop Poore courageously moved his cathedral to a new site on the plain a mile or two distant, and here he built a new cathedral untrammelled by the usual exigencies of space, or by any existing structure. The building is a symmetrical one, the cloisters being an afterthought, and suggests—as we might imagine—that the picturesque and rambling features of mediæval architecture were due rather to the patching of old structures than to any deliberate intention of their designers.

Salisbury, besides its unusual freedom from patching and extension, has an almost classic sense of repose, arising in part from the heavy horizontal base courses from which it springs. This static quality was originally even more marked, for it was only intended to have a low tower like Westminster Abbey. But no-one need regret the great tower and spire, which are now the cathedral's crowning glory. They were built towards the middle of the fourteenth century on the original slender piers and poor foundations of the low central tower—a feat which only the fool-hardy masons of the Middle Ages would have dared to tackle. The timber scaffolding of the spire was left inside to give some added strength, and yet a hundred years later double-arched buttresses had to be built across the tower arches—as at Wells—to stiffen the slender piers.

Started in 1220, the main church was completed by 1258, except for the west front and spire. It had cost the modern equivalent of well over half a million pounds. In style it belongs to the South-eastern school, and has a grandeur of conception outstanding even in the Middle Ages, though it lacks the interesting and exquisite detail of Wells. Its one blemish is the west front, which is quite one of the worst in England, saved from vulgarity only by its materials; one imagines that it was carried out by less competent hands than was the main building. Age has dealt kindly with this mediæval masterpiece, softening its asperities and painting roof and walls alike with the mellow patina which time alone can give, though unhappy restoration has operated adversely. Even the loss of stained glass is in some measure compensated for by the brave lightness given to its great interior.

Salisbury indeed stands near the peak of Early Gothic, when the

style was still fresh and adventurous. It is a tempting subject for research in mediæval proportion, for nowhere did designers have a clearer field to follow the "mysteries" of their craft, which almost certainly included theories of ratio and mystical perfection.

Unfortunately no one yet appears to have made a serious study of this subject in England, though F. M. Lund, in his book *Ad Quadratum*, made an exhaustive enquiry into the geometry of the Norwegian cathedral of Trondhjem, and other structures. We know that certain proportions, such as the 5 : 8 ratio, were favoured by the mediæval designers, and that certain angles, such as "the golden cut," seem to have been handed down from the ancient world; while later the angle of 51°50' (the angle of the great pyramid) appears with a frequency suggesting something more than accident. The use of some system of regulated proportion may well have been handed down through the masons' guilds of Lombardy, and would accord with the prevailing mysticism of the period, and its passion for order, symmetry and symbolism. "The church was orientated towards the east, and each cardinal point had its significance. The north (region of cold and darkness) is commonly consecrated to the Old Testament; the south (region of warmth and light) to the New. The western façade, facing the setting sun, is reserved for scenes of the Last Judgment" (*Religious Art in France, XIII Century*, by Emile Mâle).

The right hand was the place of honour, and the higher place more important than the lower, and all persons represented must be nicely placed in order of precedence. Choirs of angels were commonly placed in the order devised by St. Dionysius, viz. Seraphim, Cherubim, Thrones, Dominations, Virtues, Powers, Principalities, Archangels and Angels. The twelve Patriarchs might be balanced against the twelve Prophets and the twelve Apostles, or the four major Prophets balanced the four evangelists, while the Virtues balanced the Vices. Four was the number of the physical elements and three that of the spiritual Trinity. To multiply four by three was mystically to infuse body with spirit—to establish the universal church, of which the twelve Apostles are the foundation.

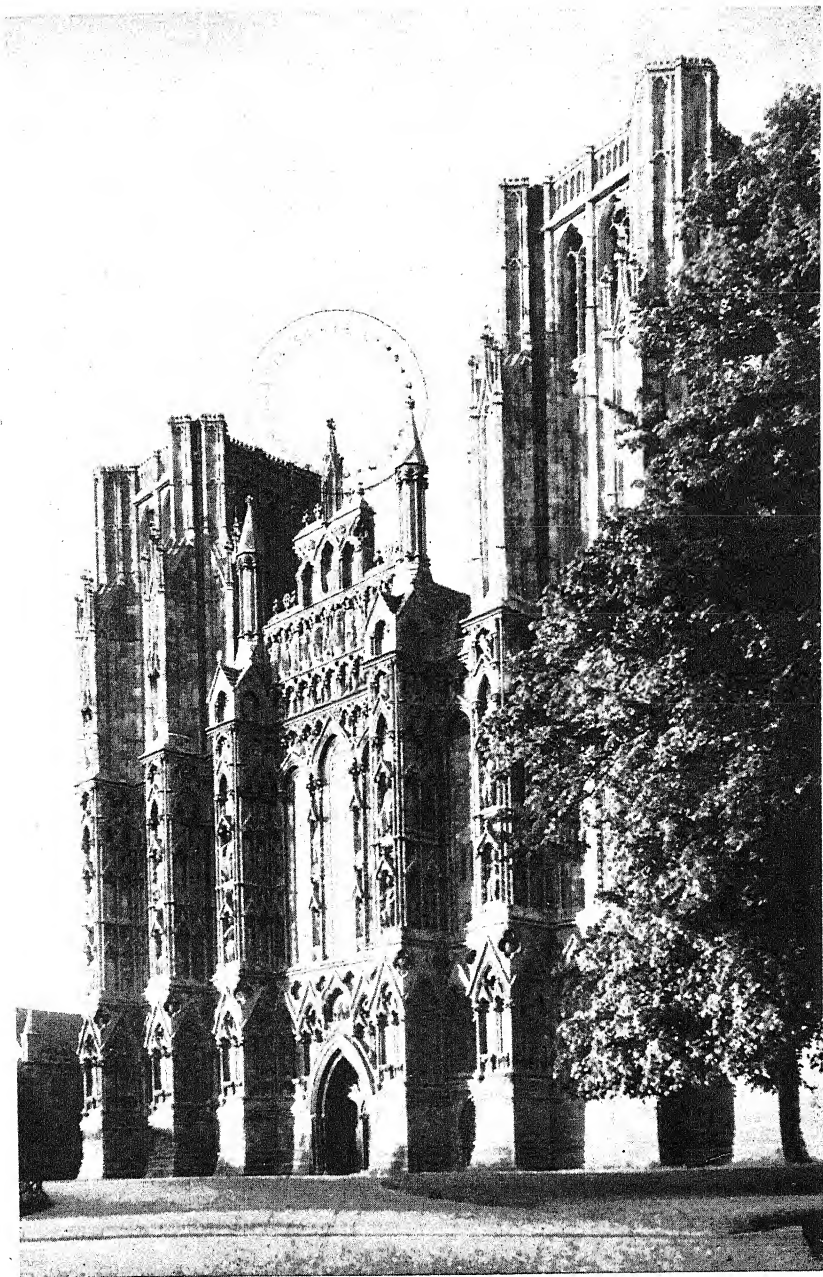
A rigid tradition fixed the pictorial conventions used. God the Father, God the Son, the Angels and Apostles were portrayed with bare feet, but so to portray the Saints or the Virgin would have been the height of impropriety. The circular nimbus expressed sanctity. Impressed with a cross it became a sign of divinity. The aureole expressed eternal bliss, and was the proper appendage of the Trinity, the Virgin Mary, and the souls of the Blessed. St. Peter must have curly hair, a short, thick beard and a tonsure; St. Paul a bald head and long beard. The very positions of the figures in Biblical scenes was fixed by usage, and no individual artist dared to alter them until the Renaissance loosened the hold of the Church.

In such an atmosphere the mystical use of proportion would hardly surprise us, and it is to be hoped that the subject will be more fully investigated by someone with access to measured drawings. *Ad Quadratum* perhaps tends to overstate the case, and the subject has never had the support it deserves. Actually, both theories and symbolism were more in evidence in Northern France than in England, but even so the larger churches here should afford examples of at least a system of proportion, just as they show considerable knowledge of scientific construction. It has even been suggested that construction was an obsession with the mediæval builders, and that the larger churches, particularly in Northern France, were stone skeletons—with all their bones exposed to the weather. Investigation has certainly proved that the size and shape of buttresses, vaults, and even window mullions, conform with surprising exactitude to modern scientific calculations. They must have been designed, therefore, on some definite system, even though the system itself was discovered by trial and error.

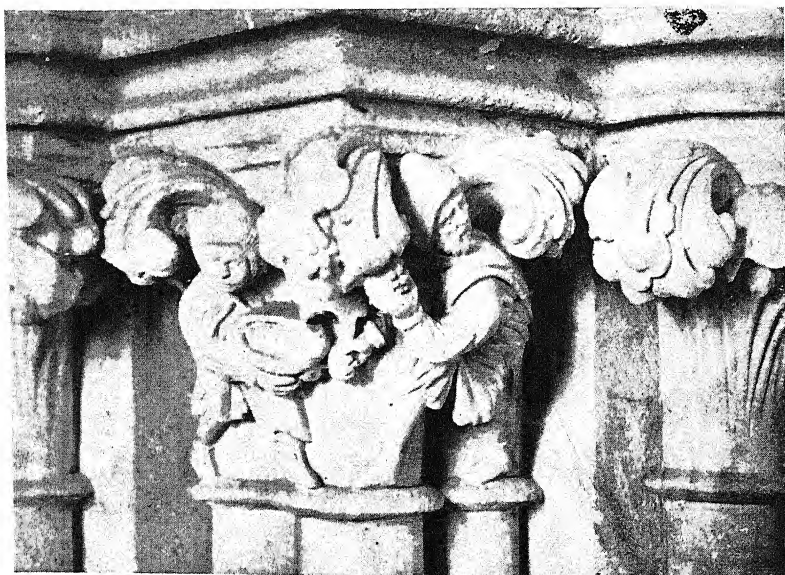
That the builders were nothing if not adventurous is evident from the many collapses recorded. Ely, Peterborough, Lincoln, Winchester and Ripon, for instance, all suffered the collapse of a central tower. The spire of Norwich blew down, and five bays of St. Albans nave fell in 1323. The list could easily be extended, and serves to show the foolhardiness, and even the dishonesty, of the masons, who sometimes skimmed foundations in order to make a show above ground, and not infrequently filled their walls and piers with all sorts of rubbish. It is only fair to say that, where it was efficient, the work often reached a high standard of engineering excellence, as in Lincoln nave. On the whole, however, the hair-brained adventurousness which raised Salisbury spire on such inadequate foundations is less exceptional than the fact of its survival.

In contrast to the glory of Salisbury is the lovely detail of Wells. Even the west front (1220–42), which derives from the Salisbury school, is richly set with sculpture (26). There was evidently a school of fine carvers at Wells during the late twelfth and the thirteenth century. Their work may not reach quite the heights of the figure sculpture at Chartres, but it compares favourably with anything in England. In the interior of Wells may be traced almost the complete development of the foliated Gothic capital (27, 28), starting with the choir and working westward, then returning to the western aisles of the central transept, the staircase, chapter-house, and finally the Lady Chapel. Many were carved after completion of the structure, their chronology extending into the fourteenth century.

At Lincoln, also, important work was in hand. The Norman fabric was rent by an earthquake in 1185, and the task of rebuilding

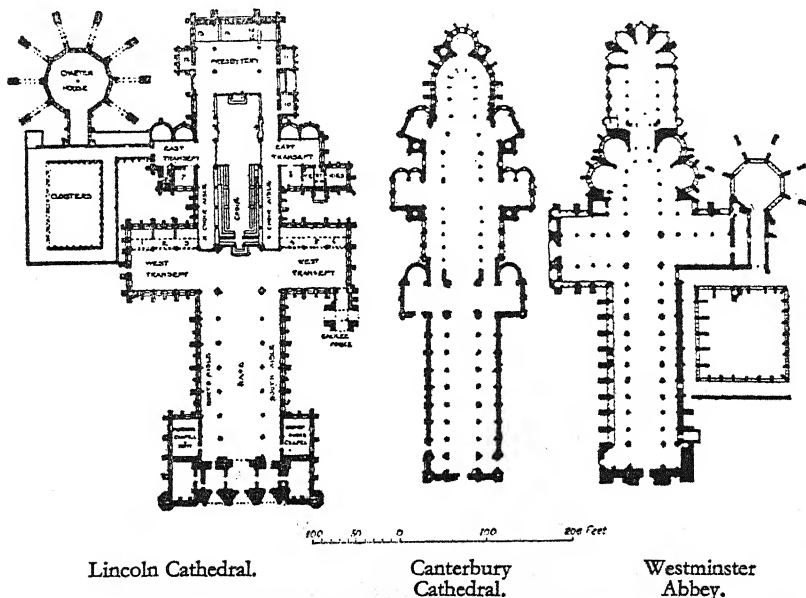


26 WELLS CATHEDRAL, Somerset. THE WEST FRONT. *Ca.* 1230. Completion of towers, Fifteenth Century.



27, 28 CARVED CAPITALS, WELLS CATHEDRAL, Somerset. Thirteenth Century.

began seven years later. Before the high vaults could be completed, the central tower collapsed in 1237, and had to be rebuilt. Further extension of the eastern limb followed, and the church was practically completed as we see it to-day by the early fourteenth century. The nave has qualities at least comparable with Salisbury, than which no higher praise could be given. Its fine vault already shows a tendency to increase the number of structural ribs—a trend which reached its height at Exeter early in the following century (2, 47). The "Galilee" porch of Lincoln's south transept (1240-50) is famous for the profusion of its "tooth" ornament, while the cathedral's



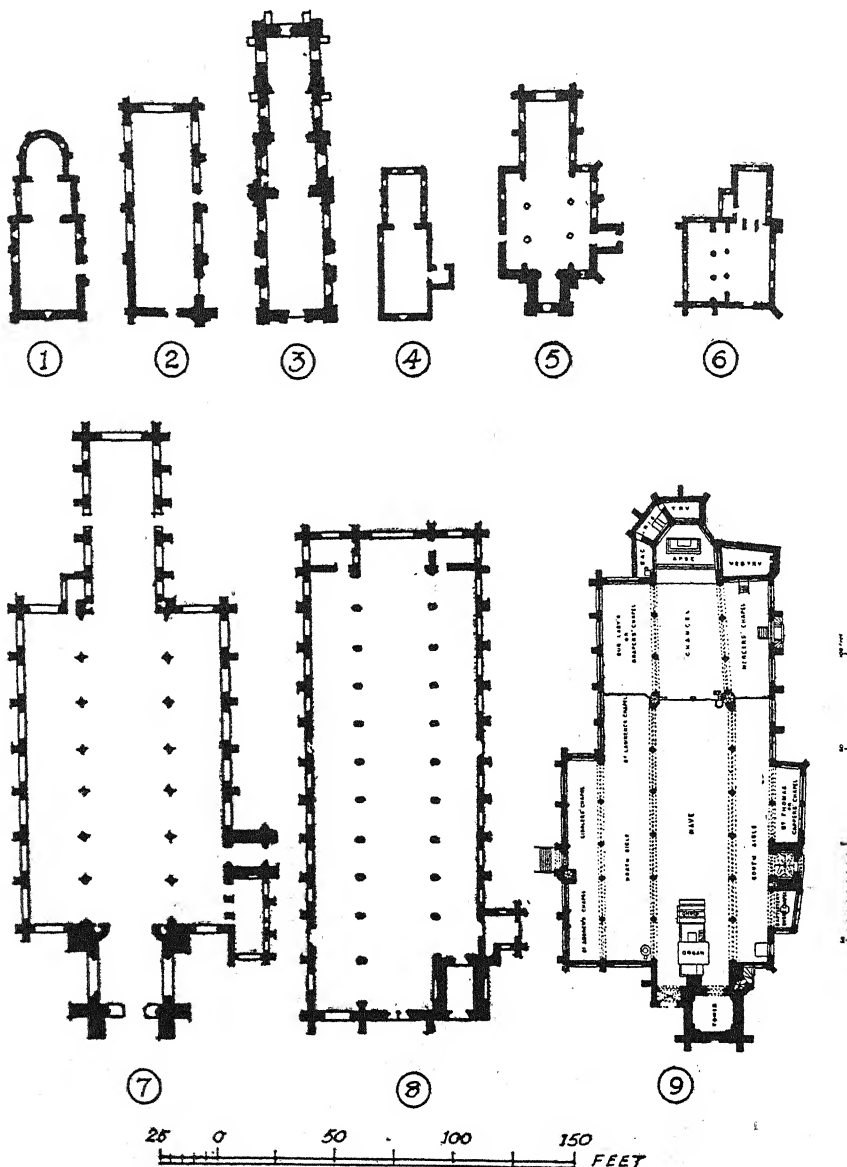
Lincoln Cathedral.

Canterbury
Cathedral.Westminster
Abbey.

Note foreign influences in Canterbury and Westminster Plans.

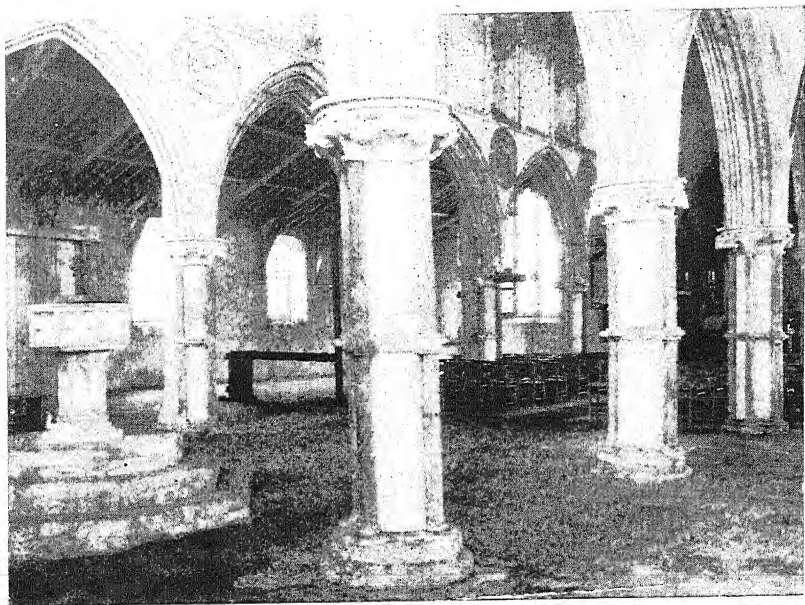
crowning glory is the "Angel" choir (1255-80) (31), richly ornamented, if extravagantly named in view of the unobtrusive appearance of its carved angels in the clerestory spandrels. It is "Geometrical" in style (to use the appropriate nineteenth-century label), the windows and other openings having already developed simple tracery of cusped circles.

Yet another thirteenth-century work of major importance was Westminster Abbey, the design of which shows evidence of Henry III's enthusiasm for contemporary French work (30). No doubt a truly French cathedral would have been even taller and more compact, but the design is essentially in the French manner, both in its proportions and in the use of the "chevet" and flying buttress, though its Englishness is apparent in a certain homeliness

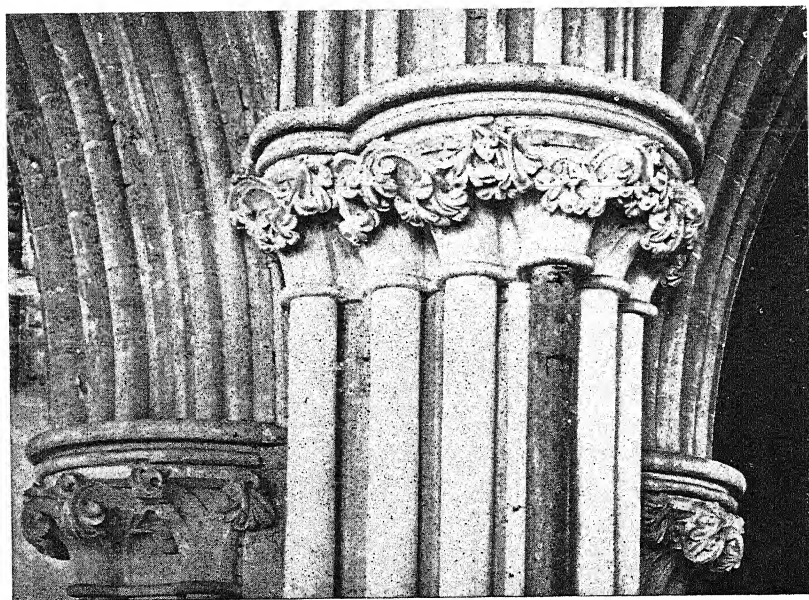


Development of Parish Church Plans.

- (1) Kilpeck (twelfth century, three divisions); (2) Temple Balsall (aisleless chapel, thirteenth century); (3) Ilfley (axial tower, twelfth century); (4) Tangmere (nave and chancel, thirteenth century); (5) Ayston (two-aisled, thirteenth century); (6) Baginton (irregular-aisled, thirteenth century); (7) Boston (large town church, fourteenth century); (8) St. Nicholas, King's Lynn (continuous arcade, fifteenth century); (9) St. Michael's, Coventry (large town church, fifteenth century).



a. The nave arcades from the South-West.



b. The north chancel arch capitals.



30 THE NAVE, WESTMINSTER ABBEY, London. *Ca.* 1250. (The Screen is modern.)

and manageability of scale. Under the spur of royal patronage the work went on quickly, no less than six hundred men being employed at one period. "The Abbey" belongs to the period which Professor Prior describes as continental and regal, and is a monument both to the King's enthusiasm for fine architecture and to his love of the work of the French masons.

In the larger churches the thirteenth century was mainly marked by an almost universal extension of the eastern limb. Canterbury had already tackled this problem, forced on it by the burning of Conrad's Choir (only some of its magnificent stained glass belongs to the early part of the fourteenth century). Lincoln followed the example, as did Chichester, Ely, Exeter, Lichfield, Peterborough, Rochester, St. Albans, Southwell, Wells and Worcester. Durham, with its Chapel of the Nine Altars, is another fairly early example, as was Fountains Abbey, both solving the problem of altar space by a transept-like termination of their eastern limb. Winchester, like Lincoln, followed closely on Canterbury. Only Norwich found its exceptionally long Norman choir adequate, and even here the contemporary passion for Mariolatry caused the addition of a Lady Chapel, since destroyed, and now replaced.

In style the period is marked by the pointed arch, a growing lightness of structure, and the mastery of vaulting problems. Windows, at first single pointed lights, were now arranged in groups (48, *b*), later with quatrefoil or trefoil openings above, so that by the middle of the century the elements of the traceried window were apparent. Traceried windows continued to be built up of easily recognizable geometrical shapes for the remainder of the century (48, *c*), the style being named from this feature. Mouldings began to be noticeable. The Normans hardly went beyond the rough shaft or round, with some vigorous ornament, but by the thirteenth century, wave, hollow and roll mouldings, with or without fillets, were all in evidence. They commonly fitted within the outline of a number of square recesses or "orders" (quite a different use of the term from the classical one), for the mason was a practical man who wasted as little stone as possible. The general effect was to emphasize the shapes of openings by a series of marginal shadow lines, often of considerable subtlety. Sometimes the effect was punctuated by enrichment, such as "dog tooth" ornament, and the use of shafts of stone or marble with stylized foliated capitals adding grace and crispness to the composition. This use of marble shafts was a particular characteristic of the South-eastern school, though marble from the Isle of Purbeck reached wherever there was water transport. It is not a true marble, but as the best obtainable locally was in great favour both for columns and tombs.

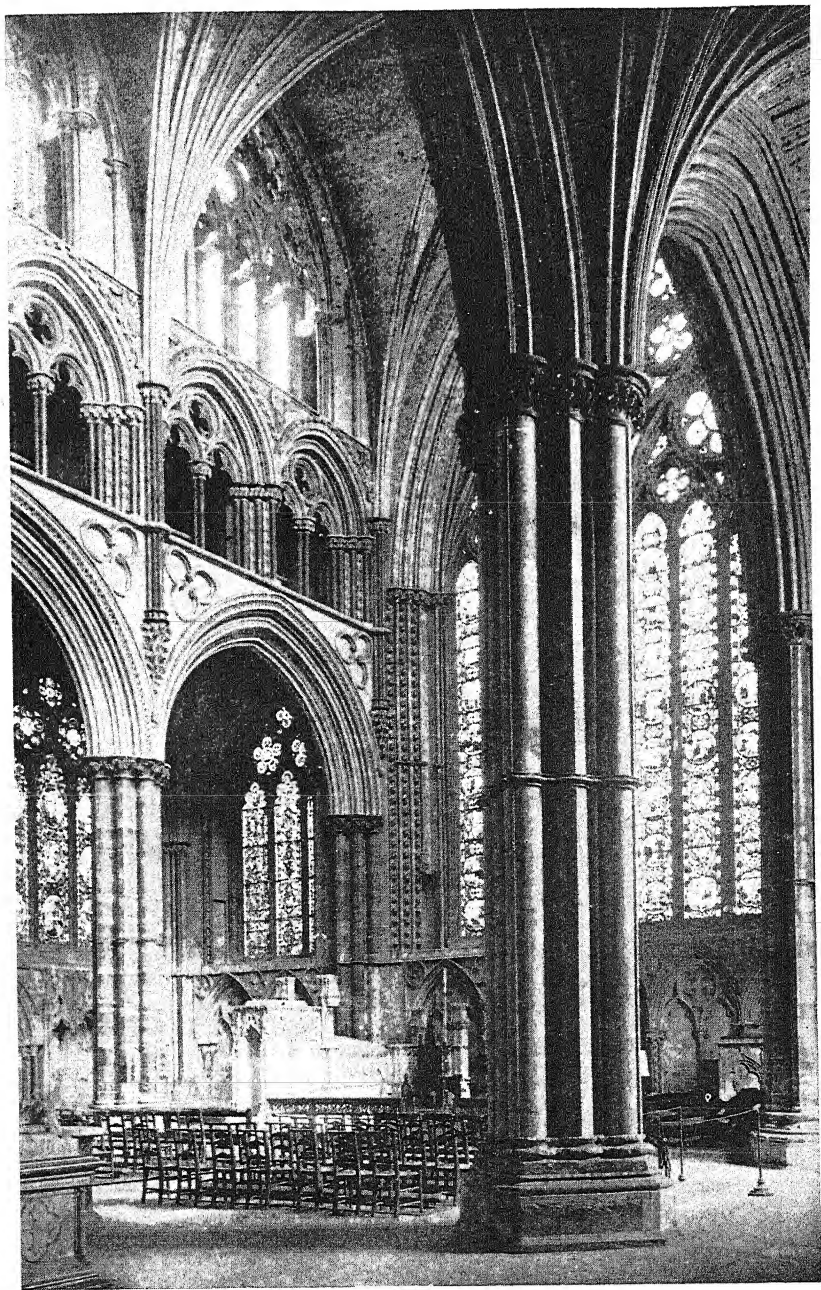
The smaller churches varied from very simple and severe

structures to buildings nearly as elaborate as the cathedrals, and certainly comparing favourably with them in detail. A case in point is West Walton, Norfolk, whose nave, arcade and detached tower set a standard worthy even of the splendid churches of East Anglia (29). Like the cathedrals, the parish churches were expanding, and there began the addition of aisles and chapels which was to continue as long as the Church maintained its supremacy. The eastern arm was often the first to go, as in the larger churches, to be replaced by a more adequate chancel with a square end.

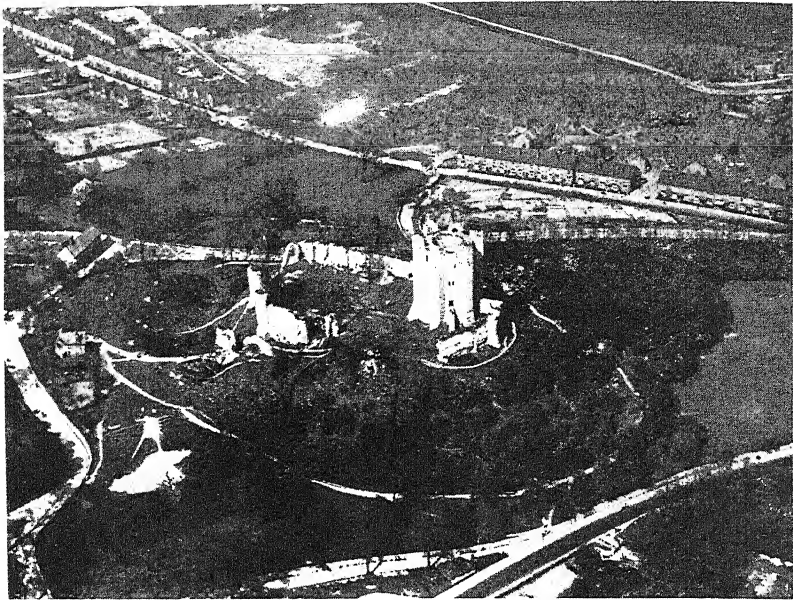
When the body of the church became inadequate for congregational needs or ecclesiastical dignity, it might be extended by aisles of the lean-to variety. Alternatively, these might have their own pitched roofs and gables, or a new nave might be built, leaving the old to serve as an aisle. The Church services could not meanwhile be entirely interrupted, and many were the shifts to which the builders were put to preserve some portion in use. Labour presented less difficulty than materials, so that anything of the old structure that was usable was incorporated into the new, if only as filling. Men built for the glory of God, and the mere space necessary to accommodate the local population was not allowed to prejudice the erection of larger churches, which would better glorify the Deity—and incidentally the Church authorities (see also p. 49).

Church policy no doubt dictated sustained expansion, but on the whole the Church served the community well and continued to be popular. With its double appeal of religious establishment and guardian of the learning of Rome, it alone sustained culture and maintained a Europe-wide organization. Not until the great Schism of 1378 did it begin to lose its supremacy, and even then decay was a very slow process. A few rash trouble-makers might even yet dare to question the wisdom of Mother Church, but such quarrels were petty and domestic. In towns, no doubt, the citizens found the barons less averse to development—for a consideration. In Coventry, for instance, the Earl's half of the city enjoyed rights of commerce still disputed by the Prior, but there was a difference between discontent with the Prior and discontent with the Church, whose benefits were too obvious. It was still the centre of communal life. The monasteries not only cared for the poor, but established schools, and helped to found the universities. Many of them were even prepared to guarantee food and shelter for life to those who gave their wealth to them—an early form of insurance called a "corrody." Nor were such bargains always to the advantage of the Church, for several monasteries got into serious financial difficulties over these and other transactions, and their affairs had to be taken in hand by the Church authorities.

One interesting detail of the later century may be mentioned. It had been the custom for the priest to pour away the remnant of



31 LINCOLN CATHEDRAL. The Angel Choir, looking east. *Ca.* 1270.



32 CONISBOROUGH CASTLE, Yorkshire. *Ca.* 1220.



33 STOKESAY CASTLE AND CHURCH TOWER, Shropshire. Thirteenth Century and later.

the wine after Mass, and for this purpose a stone basin, or "piscina," was provided in a recess, with a small drain delivering over consecrated ground. It now became usual for the priest to wash his hands ceremonially before Mass, and a second piscina was provided. Very shortly, however, the priest himself drank the remains of the wine, and the double piscina disappeared. It is thus a feature only of this short period, *e.g.* at Temple Balsall, Warwickshire.

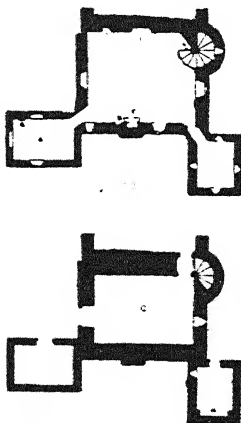
Roofs of the period were normally steep in pitch, of the type associated with tile or thatch, even when the covering was lead. It was only later that the builders realized that lead was more reliable on a flattish roof, where it would not slide or creep with expansion and contraction. On many a church tower can still be seen the old drip mould or other mark of an early high pitched roof which has since disappeared.

Sometimes the later low-pitched roof would be kept at the old ridge level, the old walls being raised and clerestory windows inserted. In this case the marks of the old roof appear inside the building.

Domestic architecture was improving with social conditions, though the peasantry were still desperately poor by modern standards. The common field system helped to equalize the countryman's hardships, but made control of stock and breeding practically impossible. Fresh food was rare during the winter, and cattle had to survive as well as they could. Farm servants continued to live in cattle-sheds until the sixteenth century. The smallest house still utilized such materials as small timber, faggots, brushwood, reed, straw, turf and mud. It was a frequent tradition, even with larger houses, that they should be sunk slightly in the ground—no doubt a relic of the old hut circle. Evidence of the slightness of house construction is afforded by the following record from the Manor of Wakefield (1297). "Peter the Shepherd gives 6*d.* for leave to buy a house from Geppe Strok, and to erect it at Milnthorpe."

The carpenter's main tool was still the axe, the saw being a rarity and the chisel probably unknown. Nevertheless, some improvement was taking place in larger houses, particularly in the towns. London regulations of 1212 required that thatched roofs should be whitewashed, and that cookshops "be plastered within and without, and all chambers and hostelryes be removed so that there may remain only the house and bedroom." This was, of course, a safeguard against fire. The cruck house (50, 51) probably continued to be the prevailing type, though definite evidence is lacking until the following century. The farmhouse had its barn adjoining, with a threshing floor between. It is from the fact that this also served as entrance that our term threshold appears to have derived.

In larger houses any upper room not primarily intended as a bedroom seems to have been called a "solar." A fair idea of the standards of comfort then accepted may be obtained from the instructions issued by Henry III for the care of his many houses and castles, of which the following are extracts: At Winchester, "everywhere to repair the crevices in the said hall"; at Westminster, in ordering a glazed window for the Queen's Wardrobe, "so that chamber may not be so windy as it used to be." Again at Westminster, there is an account for "the conduit of water which is carried underground to the King's Lavatory and to other places there, and for making a certain conduit through which the refuse of the King's kitchen at Westminster flows into the Thames, which conduit the King ordered to be made on account of the dirty water which was carried through his halls, which was wont to affect the health of the people frequenting the same halls."

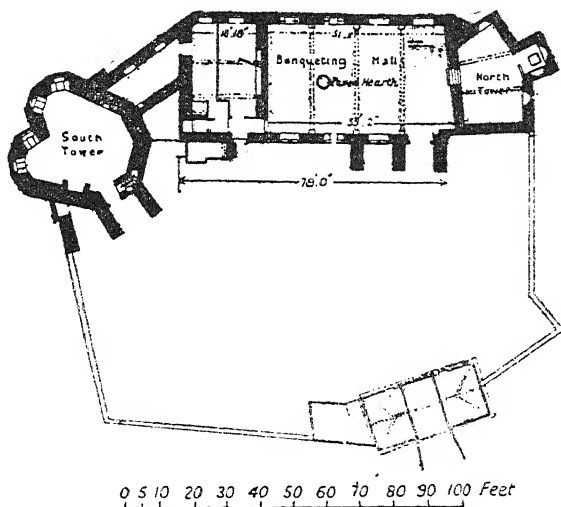


Old Soar, Plaxtol, Kent.

Sanitation was on the whole conspicuous by its absence. In the great abbeys, where life was lived in its most luxurious form, there were latrine blocks of a simple but effective character, and often a stream would be diverted through the channel below, as at Tintern. In the larger castles privies were planned in the thickness of the walls, the best examples having shafts which delivered into the moat below water level. Such offices, when opening from the great hall, were usually placed at the lower end, so that only lesser guests should suffer the accompanying offence. "The King to Edward Fitz Otho. Since the privy chamber in our wardrobe at London is situated in an undue and improper place, wherefore it smells badly, we command you on the faith and love by which you are bounden unto us, that you in no wise omit to cause another privy chamber to be made in the same wardrobe in such more fitting and proper place as you may select" (1246).

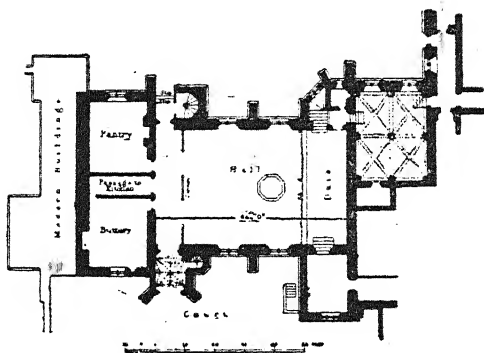
Water supply was still mainly dependent on the humble well. In smaller houses it was either under the house itself, or just outside the door, a reminder of the days when man camped by his water. Accommodation was very cramped, even in important houses. Old Soar, Plaxtol, Kent (35), the seat of the ambitious and unscrupulous Colepepper family, had only hall, solar and chapel, none of them much in size, though such private chapels were not used only for religious purposes. Stokesay was built to house a considerable body of troops, but it is quite small, and is a fortified

manor rather than a true castle (33). Owing to the existence of earlier adjoining buildings, the hall is a slight departure from the normal plan, which was entered at one end by a screened passage



Stokesay Castle, Shropshire.

known as the "Screens" or "Entry." Opening from this were normally three doors giving access to the kitchen, buttery and pantry. Fashion began to add a "solar" or "withdrawing room" at the opposite end of the hall, though those of more Spartan outlook considered it unsociable. This opened off the daïs, which may well have been the only part of the hall to have a wood or paved floor. A central hearth, as at Penshurst, was still usual, with a louvred lantern in the roof to let out the worst of the smoke. Fireplaces were beginning to appear on upper floors, with rudimentary chimneys, as at Abingdon Abbey. The century also saw the introduction of glass for domestic use, but it was still an unusual luxury. Even in the early sixteenth century it was successfully claimed by executors

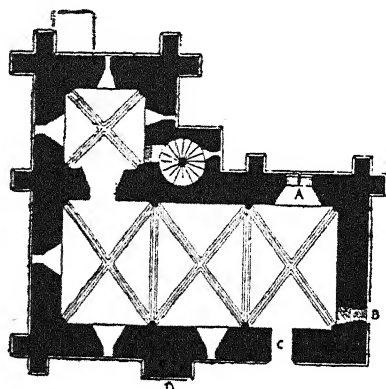


Penshurst Place, Kent.

that glass could be removed, as "the house is perfect without glass." Substitutes for glass were more usual, such as oiled canvas or wood shutters, which could be closed in cold weather. At Stokesay may be seen the reveals in which such wooden shutters fitted.

Another thirteenth-century house of interest is Little Wenham Hall, Suffolk (c. 1260-90), reputed to be the first example of mediæval brickwork in England. The introduction of brickwork into England was perhaps due to the Low Countries, where the craft already flourished. It is unlikely that bricks were imported, at least in any quantity. More often craftsmen were brought over and clay was dug and baked on or near the site. Bricks had, of course, been used in Roman times, though of more tile-like proportions. Early mediæval bricks varied greatly in size and were

usually thin, though not so thin as the Roman variety.



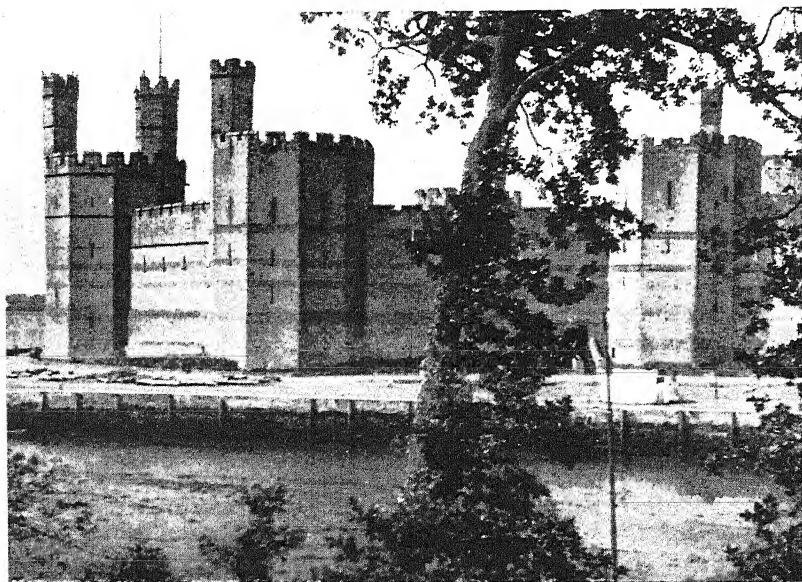
10 5 0 5 10 15 20 feet

Little Wenham Hall, Suffolk.

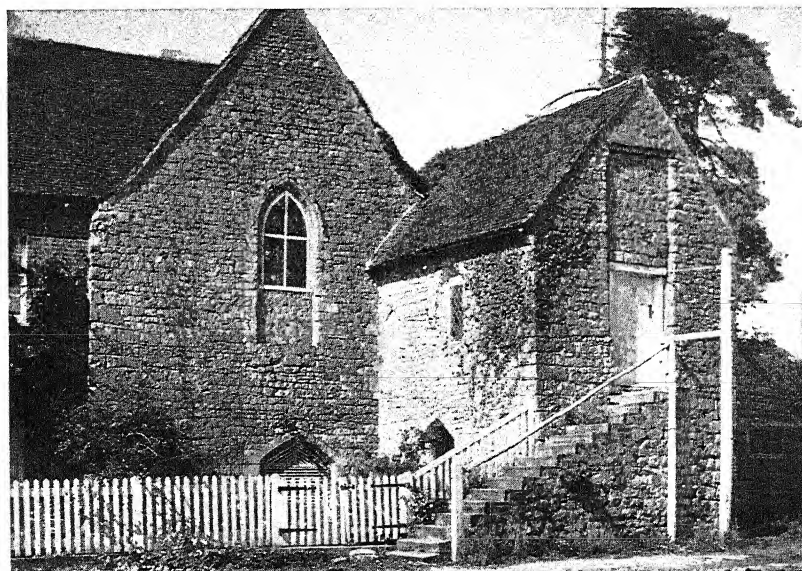
Castle design made a great advance during the century, though it never equalled the elaboration of French examples, which in turn owed much to the Middle East. The twelfth-century system of defence by court after court, culminating in the great tower, began to fall out of favour, and became further discredited by the fall of Chateau Gaillard (1204), the defenders of which were driven from court to court and did not even attempt to hold the tower

itself. The great tower or donjon now began to diminish in importance in favour of the outer walls or "curtain," until in the late century the whole castle had become virtually a great tower in itself. At first the walls were stiffened with occasional towers wherever they seemed particularly open to attack, but in the fully developed castle, such as Conway or Carnarvon (34), these towers were placed systematically, so that no stretch of wall was unprotected by flanking fire. Added to this came the development of the "barbican," or protected gateway, with double doors and portcullis enclosing a space commanded from above. The earlier part of the century may be represented by the gateways of Rockingham or Barnwell Castles; the later by those of the Welsh castles, or by Walmgate Bar, York.

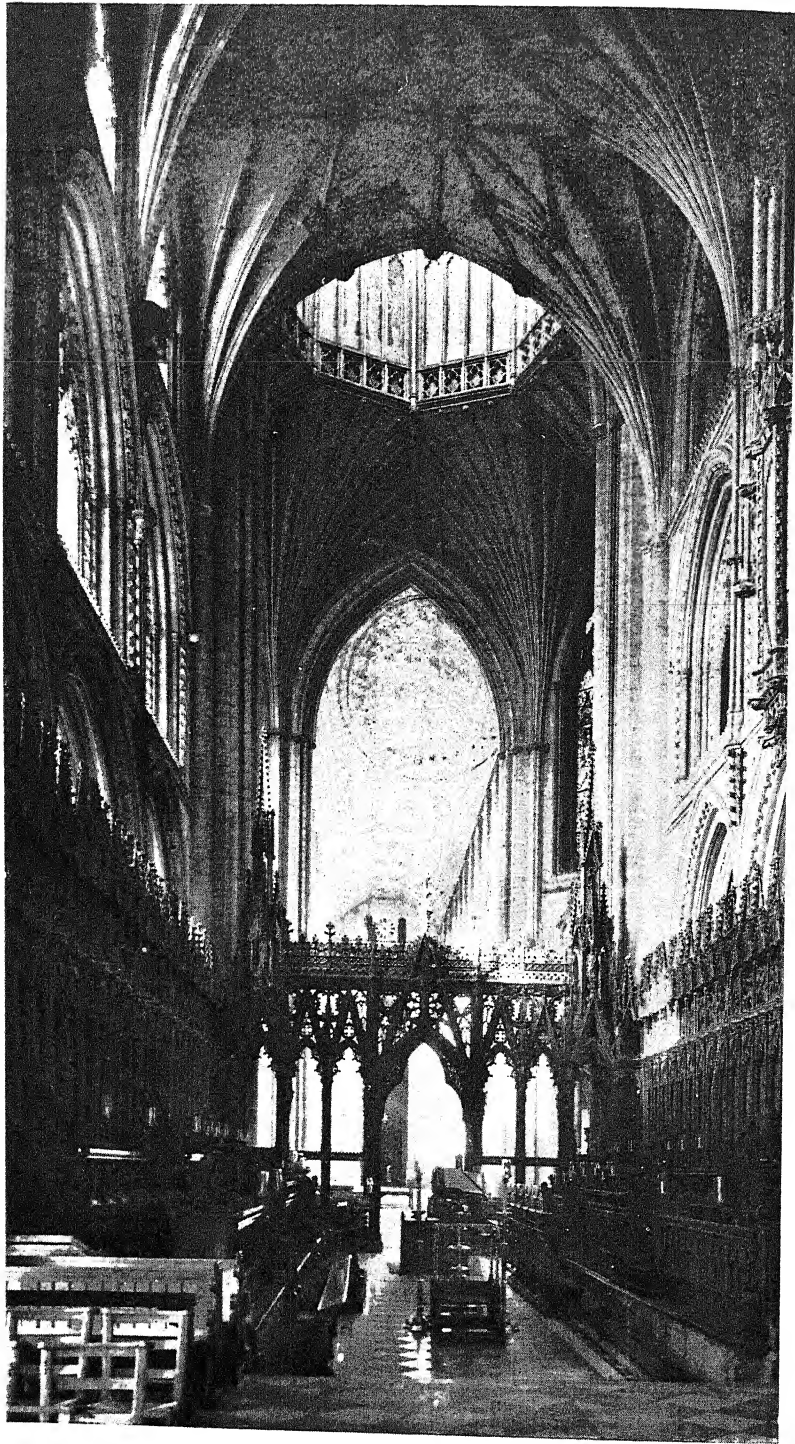
Conway and Carnarvon represented a development on which little advance seemed possible. Scientifically planned, immensely strong, and with two entrances from either of which sorties could be made,



34 CARNARVON CASTLE, North Wales. Late Thirteenth Century.



35 OLD SOAR, PLAXTOLE, Kent. *Ca.* 1300. (With later additions.)



36 ELY CATHEDRAL: THE OCTAGON FROM THE CHOIR. *Ca. 1340, Henry Hurle, master carpenter. (Stalls, Fourteenth Century; carving over Stalls and Screen, modern.)*

they were the practical apex of achievement. Yet some slight advance in neatness and theory at least was to follow, producing the final type of concentric fortress exemplified in Harlech, Beaumaris and Caerphilly. The first two, particularly, with their low outer defences completely commanded by the main walls and their geometric plans, are very striking in their efficiency. Another late feature is the corbelled parapet in stone, with "machicolations" or openings in the floor for downward fire. It was first used over gateways.

Domestic buildings also were now more commonly built in stone. We have already noticed a twelfth-century hall at Oakham, of the aisled type. This type is unusual, but occurs in the thirteenth century at Warkworth (elaborated in the fifteenth century) and at Winchester. Durham shows magnificent examples of stone domestic buildings from both centuries, Bishop Pudsey's three-storey block of the late twelfth, and Bishop Bek's Hall of the late thirteenth century, occupying adjacent sides of the courtyard. The normal plan was still for the hall to be on the first floor, with the great chamber at one end and the kitchen at the other. There were, however, many exceptions. Conway and Carnarvon, for instance, had their kitchens placed opposite the hall owing to lack of space. Most castles utilized existing sites and buildings of earlier days, which meant an ingenious remodelling of the defences on new lines rather than any wholesale rebuilding, the addition of towers to the curtain and introduction of the barbican being the most marked features.

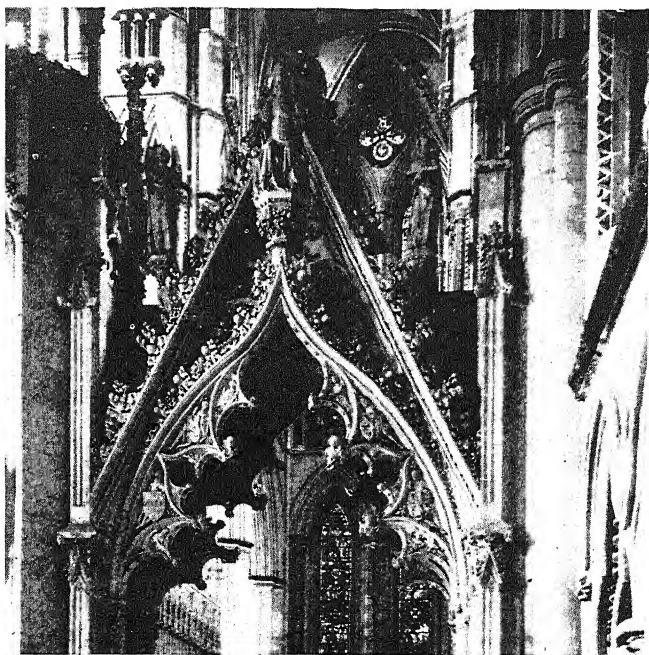
THE FOURTEENTH CENTURY

FEW periods have such stirring associations as the fourteenth century: Crécy, Poitiers, the Black Prince, Chaucer, Mallory and Froissart. Even the great scourge of the Black Death was dramatic in its intensity, while in spiritual matters the name of Wyclif heralds the first stirring of the Reformation. In Italy the century opens with the mediæval figures of Dante and Giotto, but before its close appear Petrarch, Boccaccio and Botticelli, all associated with the Early Renaissance. In England, however, over two centuries were to elapse before the classical revival appeared.

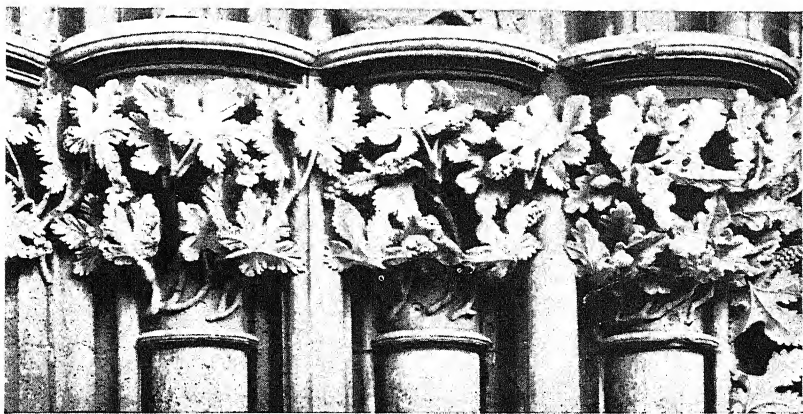
The early part of the century witnessed the period labelled "Decorated" by the Victorians, who saw in its richness the apotheosis of the Gothic style. The modern and less reverent observer may prefer to class it as "fat and florid," though not without some exaggeration. This period was one of those literary and adventurous ones which commonly mark a decline in the arts, such as occurred in architecture under Elizabeth and Victoria. Fortunately for the architecture of the fourteenth century the guilds were by now too firmly established for amateur incursions to become serious, nor was there any readily available alternative style to borrow, so that a definite break with tradition was impossible. Romantic and exploratory tendencies thus caused merely an added richness and variety which mark the period preceding the great bubonic plague epidemic of 1349—the Black Death—which destroyed nearly half the population.

Among the cathedrals the work at Exeter may be taken as typical of the period in its best sense. Both nave (2) and choir had been largely rebuilt by Bishop Grandisson by 1345, their main lines following designs prepared at the end of the previous century. It is to this last fact that they owe their unusual unity. The rich vault shows the logical climax of the tendency to increase the numbers of intermediate or "tierceron" ribs (2, 47, c). Its forest-like effect is of the type which made amateur critics persuade themselves that Gothic vaulting had been developed from the woodland glade—an essentially literary theory, charming as an allegory but factually baseless.

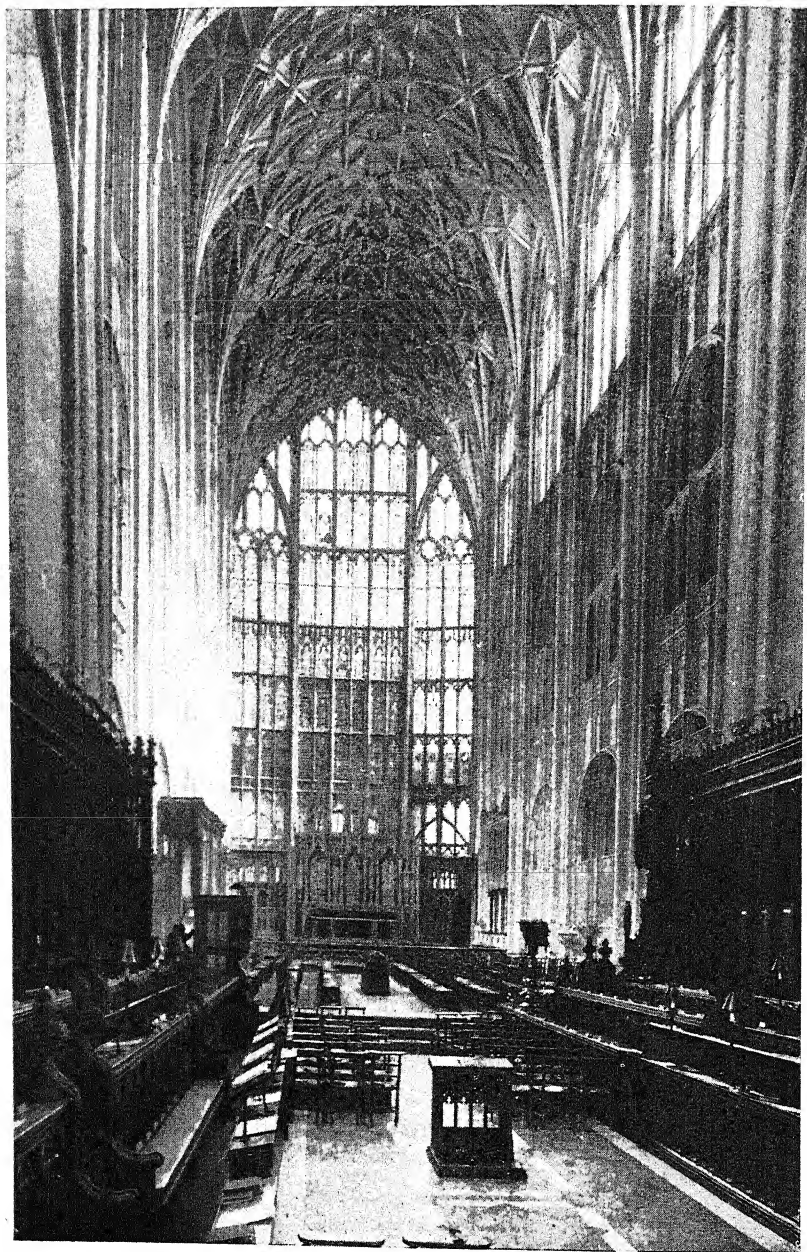
The next vaulting development was an increased use of the secondary or "lierne" rib. In English vaulting, which already used a ridge rib, this was a fairly natural application of the tendency to additional ribs. The only departure from previous practice was that the lierne rib was not usually structural, so that its introduction



37 DETAIL OF CARVED CANOPY, THE PERCY SHRINE, BEVERLEY
MINSTER, Yorkshire. *Ca.* 1340.



38 CARVED CAPITALS IN THE CHAPTER HOUSE, SOUTHWELL MINSTER, Nottinghamshire.
1294.



39 THE CHOIR GLOUCESTER CATHEDRAL. *Ca.* 1337-1357

was almost entirely for the purpose of pattern-making (47, *d*). Much the same tendency towards elaboration appeared in windows, the tracery of which was no longer based on obviously geometrical shapes (48, *d*). Hence the name of "curvilinear" sometimes applied to the period.

Other fine work of the first half of the century occurs at Ely (36), Carlisle, Southwell (38) and Lichfield. At Ely the central tower collapsed in 1322, taking the end bays of the nave with it. The monks, already committed to the rebuilding of the choir, were thus faced with apparent disaster, but rose above it by recognizing only glorious opportunity. Under Alan of Walsingham, Sacrist and afterwards Prior, was built the present beautiful octagon, which may have been suggested by the spaciousness of the clearance made when the tower debris had been removed. The technical designer was probably Hugh Hurle or Horlee (Hawley?) the King's Carpenter, who worked on St. Stephen's Chapel at Westminster and at Windsor Castle. He appears to have been employed at Ely as consultant from 1334 until his death in 1354, at a retaining fee of eight pounds a year. This compares with his salary as chief carpenter of £18 5s. 0*d*. a year, plus a robe worth one pound. Obviously the stonework at Ely was by other hands, as it would have been already well advanced when Hurle was called in. It was impossible to vault so large a space in stone (the span was 77 feet), but by ingenious construction and the choice of quite exceptional oak trees it was made possible in timber. The corner posts are 63 feet long and 40 by 32 inches in section, and England was searched for trees large enough to provide them. Even the resources of Ely must have felt the strain of building choir, Lady Chapel and octagon simultaneously.

At Lichfield the work was on a more modest scale; the upper part of the west front and the apsidal Lady Chapel belong mainly to this period. Lichfield stands between the North-eastern and South-western schools of design, though this is perhaps more apparent in its thirteenth-century work. The use of the apsidal termination is an individual eccentricity which occurs from time to time, though more frequently in the south-east, where continental influence was most apparent.

Southwell is particularly noted for its carving (38), as is also the Percy Shrine at Beverley Minster, which features the "ogee" or double-curved arch typical of the period (37). The history of carving and sculpture in the Middle Ages is a subject which, unfortunately, can hardly be touched on here. In column caps a descent from classical forms is certain. The French "Corinthianesque" cap develops through variations such as those at Abbey Dore, Herefordshire, and New Shoreham, Sussex, to the stiff crocketed foliage of the thirteenth century, already mentioned, at

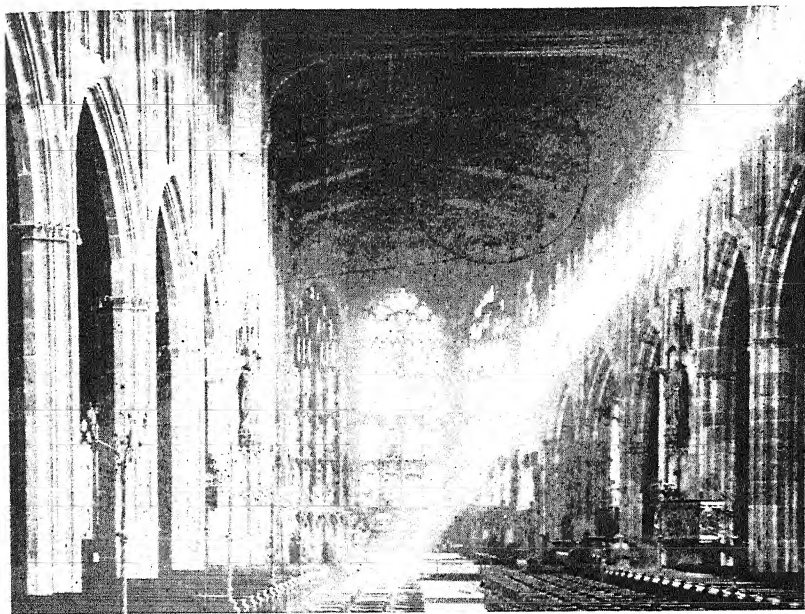
Wells (27, 28) and West Walton (29). Fourteenth-century work of the South-western carvers can be seen at Exeter, and their influence spread as far as Lichfield, Hereford and Oxford Cathedrals. Good carving, however, occurs in stone and wood all over the country in this century; mention may particularly be made of the Winchester, Ely, Beverley and Lincoln quire stalls, and, above all, of Southwell chapter-house. Sculpture is represented by the fine work at Wells of the previous century, the beautiful figure on the south side of Lincoln choir (exterior)—possibly Queen Eleanor—and by many fine figures and tombs of this and later periods.

Mouldings of the fourteenth century are rather more complex—smaller in scale and less deeply cut, and usually arranged on the splay instead of in “orders” as in the previous century. The double ogee, or bracket mould, is characteristic. A few paintings also occur, and we know that there was a competent school of Court painters at this time. It was not until the end of the century that oil painting appeared. Its invention is attributed to the Van Eycks, but there seems to have been nothing in England comparable to the work of the Low Countries in this medium. Generally speaking, mouldings, carving, and in fact design generally, increased in exuberance until the Black Death turned men’s minds to a more sober outlook, and removed many of the craftsmen capable of such elaborate work.

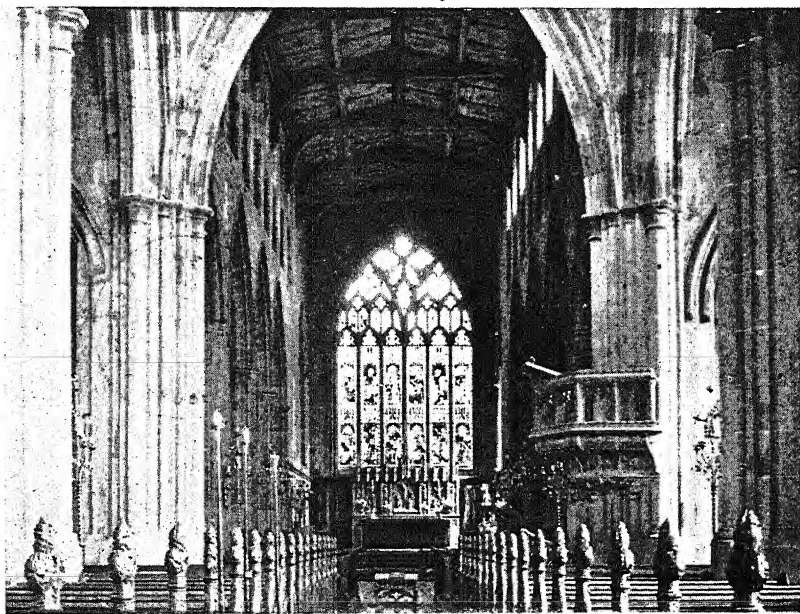
Fourteenth-century art shows the influence of the court and nobility. In detail there is a greater emphasis on the emblems of heraldry and chivalry, and a decreasing interest in the symbols of religion. This secular bias was to become even more noticeable in the later architecture of the merchant guilds, and marks the beginnings of a lessened feeling for religion which was destined ultimately to sweep away the power and substance of the mediæval Church.

A more logical style had, however, already been foreshadowed by the Gloucester masons. The cathedral of that city had lacked funds for any great extension, for there was no saint to draw pilgrims and gifts to his shrine. Bishop Thokey repaired this omission by accepting the body of the murdered King Edward II, which had already been refused by Malmesbury for fear of trouble with those then in power. Thokey fetched the body in his own coach, and his courage was soon rewarded by a series of miracles which made the new shrine a highly remunerative feature. We may well imagine that those in power saw no need to intervene in the late king’s spiritual activities, as they had done in his temporal affairs, so that the fortunes of Gloucester were made without arousing the jealousy of anyone but those abbots who had been too timid to accept the king’s body themselves.

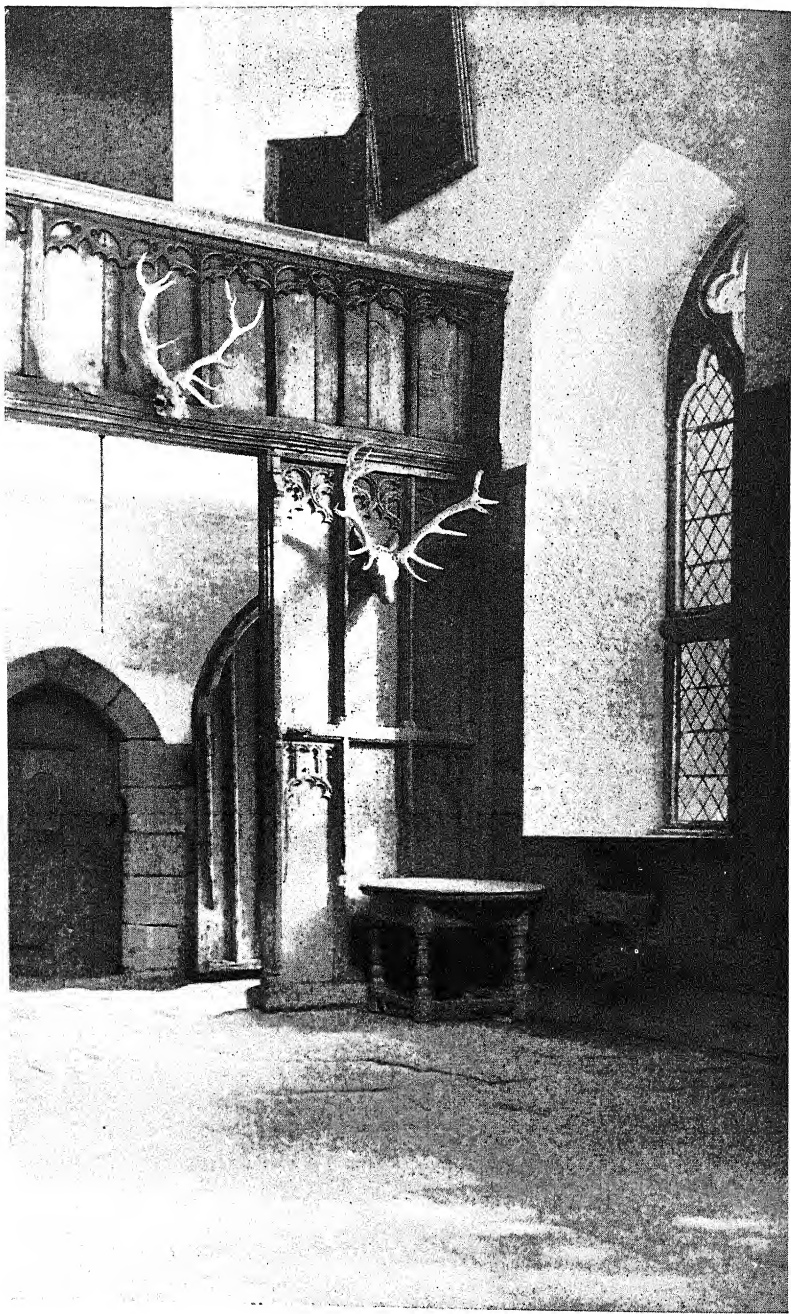
Enough money was now rolling in to rebuild the whole church, and the monks planned to enlarge and improve it, starting—as was



40 CATHEDRAL CHURCH OF ST. MICHAEL, COVENTRY, Warwickshire (now destroyed).
Late Fourteenth Century.



41 HOLY TRINITY, COVENTRY, Warwickshire. Late Fourteenth Century.



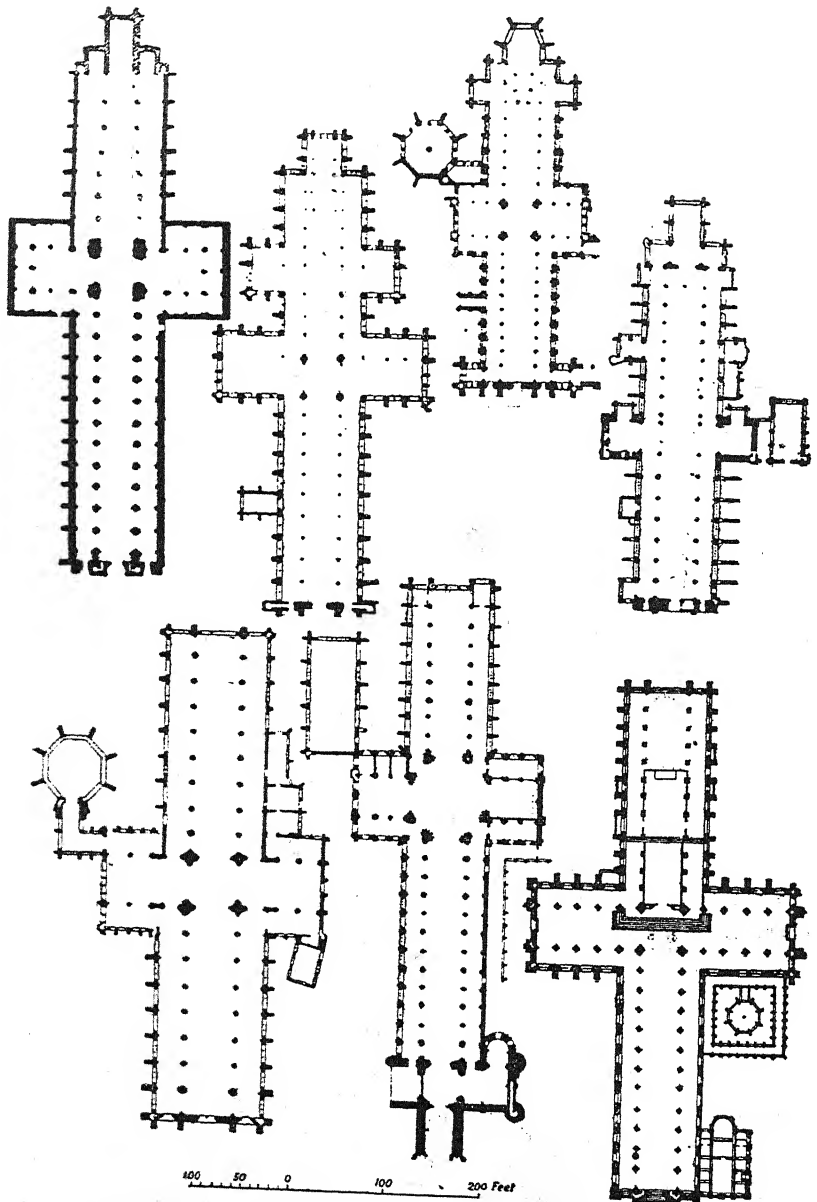
42 HADDON HALL, Derbyshire. The Hall. Early Fourteenth Century. (Screen, mid-Fifteenth Century.)

customary—at the east end (39). The flow of pilgrims could not be interrupted, but light and window space had been badly needed, and the designer certainly gave them without stint. His solution was logical and completely unconventional, for he filled in the great openings with a simple stone framework, subdivided into panels for glazing, and thus transformed a design of three rather squat storeys into a unified lofty whole. The panel system which he found necessary for his great east window and convenient for his other windows was continued over the remaining walls in the form of surface decoration, thus giving unity to the whole design, and a sense of scale, or relative size. From the glazier's point of view the scheme was ideal, for every window was conveniently divided into a series of lights, each of which could be filled with a stained glass saint.

We do not know whether the Gloucester design was as popular with the glass makers as it deserved to be, but we do know that it did not at first prove popular elsewhere. Even in the Middle Ages, when enthusiasm was such that designs were pirated as soon as they appeared, there was something in this new style which men may have found severe and unpleasant. The south transept is recorded to have been finished by 1337, but not until the completion of the whole eastern limb in the thirteen fifties did the design find admirers elsewhere. Then it appeared at Edington, Wiltshire (1352-61), and travelled with Bishop Edington to Winchester, whence it spread all over the country like wildfire. It has been usual to assume that not until the Black Death brought a more sober attitude could men appreciate the new style of Gloucester, but whatever the reason, they evidently waited until the experiment could be seen as a whole before accepting it.

The Gloucester masons were certainly adventurous. Not only did they produce this new Gothic style (labelled "Perpendicular" or "Rectilinear" by the nineteenth century) twenty years before its time; they also constructed one of the earliest known lierne vaults over the south transept by 1337, and worked it so accurately as to dispense with carved bosses, which were almost invariably used to cover the difficult rib intersections, and to give the mason some slight latitude in his setting out. Not content with this, they next produced the extremely complicated choir vault (39), and carried on their pioneer tradition by building over the cloister the first fully developed stone "fan" vault (completed by the end of the century).

The fan vault is an interesting development peculiar to English Gothic (47). It came about partly from the practice of making all tierceron ribs of equal radius at the springing in order to simplify setting out, and partly from a tendency to panel out the whole vault. Probably models over tombs and chantries first showed the possibility of a cone-like construction, and this was translated into



Cathedral Plans, showing later Eastern Terminations.

(Top row, left to right) Western Type : Winchester, Salisbury, Wells, Exeter.

(Bottom row, left to right) Northern and Eastern Type : York, Ely, Old St. Paul's.

the fan vault. Construction had thus travelled full circle from the groined vault, which was all panel, to the fan vault which was, in effect, all rib. Its main examples, however, fall in the following century, and will be noted there.

At Winchester Bishop Edington found the presbytery of the Norman cathedral already half rebuilt. The work had been halted by the plague, which is said to have swept away six thousand of the city's eight thousand inhabitants. Edington seems to have completed the windows of the presbytery, and to have started, about 1360, to remodel the long nave, of which he pulled down 40 feet to make its proportions more manageable. The new style was superimposed on the old by working new mouldings on the old piers, though as the work went on it was found simpler to reface them. Work was very slow, and it was to take over a hundred years before the nave was completed and vaulted, but the result is superb. The combination of Norman mass with late Gothic line—twelfth-century formation and fourteenth-century transforming loftiness—has produced one of the most successful church interiors in the country.

Twenty years after Winchester had adopted the new style, Canterbury—which had taught Norman Winchester—herself became pupil and rebuilt her own nave and transepts on similar lines, with Henry Yevele as designer. It is an example of the mutual give and take necessary to cultural progress.

Meanwhile Gloucester had not been entirely alone in revolutionary design. In the North, the same sound common sense that planned the great Cistercian abbeys was producing at York a great cathedral free from frills and romanticism. It was—and is—an aisled church of equal height throughout, enclosing one great space, and originally relying on screens, rather than structure, for its sub-division. The transepts of York are thirteenth and the nave early fourteenth century, yet both foreshadow the severe lines of the later fourteenth-century choir. The plan of York and the architecture of Gloucester were eventually to set a type for the whole of English Gothic, though in the fourteenth century such a result could hardly be foreseen.

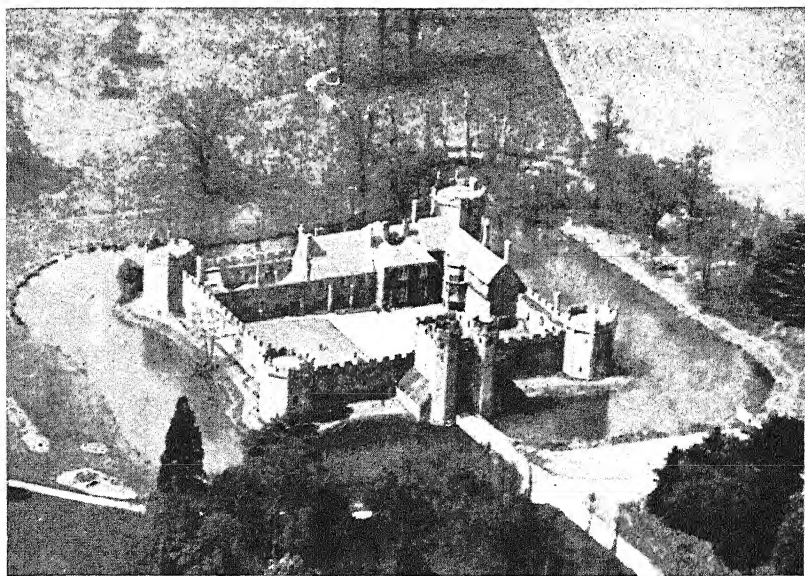
In planning, the Northern bishops had developed Ely, Lincoln, Old St. Paul's and finally York, from the Cistercian type of Jervaulx (see p. 23), while the Southern bishops had developed from Romsey (see p. 23) to Winchester, Salisbury, Exeter and Wells. Yet another type appeared in the Augustinian development of the Fountains plan at Oxford, Southwell and Beverley (see p. 23). Eventually it was the York type which triumphed, even as far afield as Bath Abbey (68). Yet compared with the earlier cathedrals, York itself seems dull, for it has lost the romance of composition. Only its magnificent stained glass saves it from the commonplace,

though it would perhaps be unfair to decry the frame which holds so rare a treasure. The church was vaulted in timber, the span being beyond the powers of the contemporary masons. The nave roof we know to be the work of Philip de Lincoln, for here, as elsewhere, the anonymity of the designer was at last beginning to disappear.

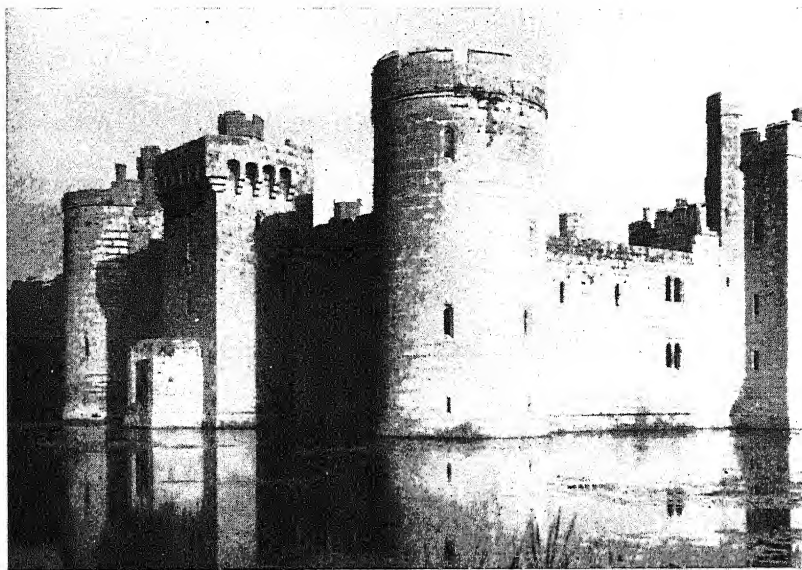
The fabric rolls of York do in fact give us a good deal of information. From Easter to the feast of St. Michael the masons began work at sunrise. They had half an hour's break for breakfast at the ringing of the bell of the blessed Virgin Mary, and "knocked off" for dinner at three o'clock. After this there seems to have been a short siesta; then they worked till vespers, and again till nightfall. Holidays varied, but on important works there seem to have been about forty-six days observed as holidays (paid or unpaid) in each year. At least on Royal works it was possible to obtain an occasional half-holiday on a Saturday, though without pay. The Masters were allowed to undertake other work in what little time they had to themselves.

In 1344 the King's Household included twenty-four masons and a hundred and thirty-eight carpenters, which helps to indicate the relative extent of each trade. We have already mentioned Hugh Hurlle, who was the King's chief carpenter in the middle of the century. An even better known name is that of Hugh Herland, who succeeded his father as King's chief carpenter in 1375. He had already worked on the stalls and vault of St. Stephen's Chapel at Westminster, and was later responsible for work at Rochester and Leeds Castles in Kent, besides working for Bishop Wykeham at Highclere and Winchester, where he is credited with the wooden vault of the College Chapel. The fact that his son was one of the seventy original scholars at Winchester suggests that he was a man of some standing. His best known work is, of course, the roof of Westminster Hall (46), where he worked in consultation with the famous master mason, Henry Yevele, for many years the King's chief mason. Yevele had been employed, as a young man, on the Black Prince's estate at Kennington, and on the great cloisters of the Charterhouse. Besides work at Westminster Hall and the Tower, he was employed at the Abbey, where he was master mason. He also seems to have prepared designs for a number of other buildings, including St. Dunstan's Church. Contemporary with Herland and Yevele was yet another well-known master mason, William Wynford, who designed the new College at Winchester, and would appear to have worked both at the Cathedral and Castle there, as well as at Wells, Abingdon Abbey and Windsor.

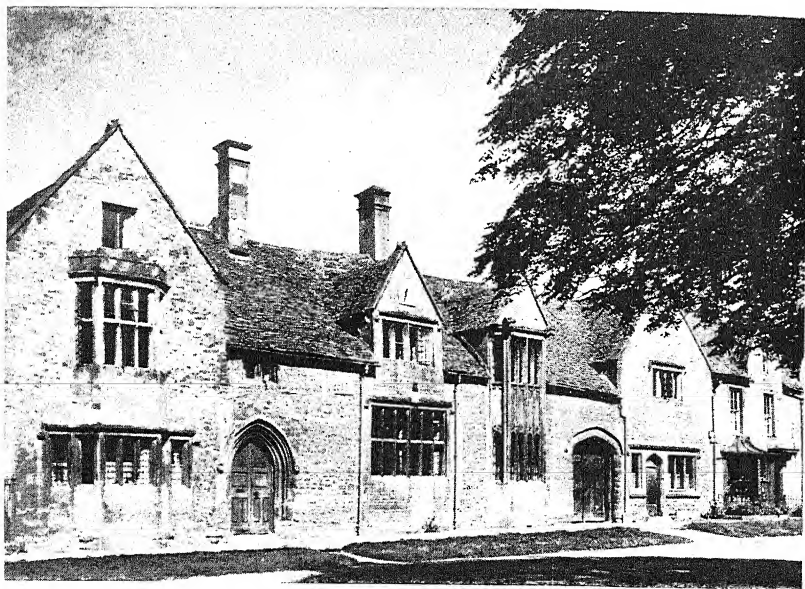
Under the capable hands of these and other designers English Gothic flourished with renewed vigour which carried it through another century and a half of effort, until it was swept away on the flood tide of the Renaissance. In contrast with France, whose



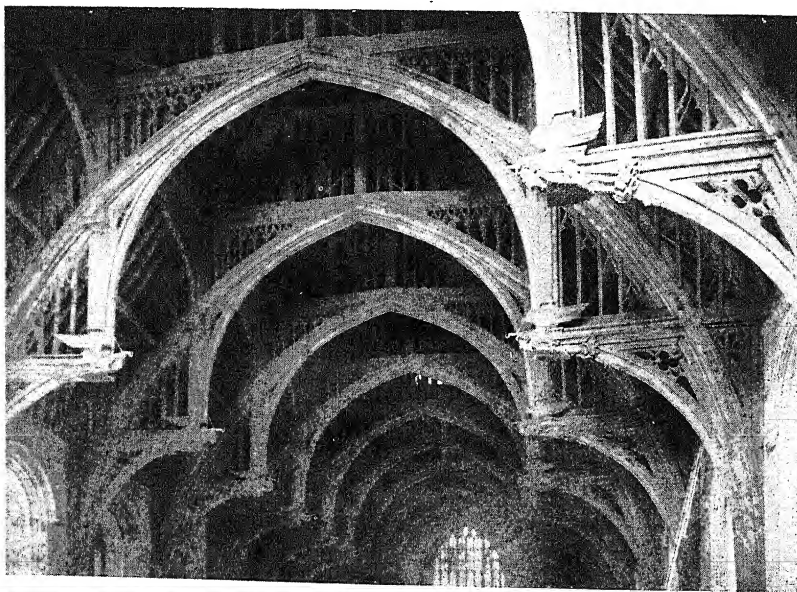
43 MAXSTOKE CASTLE, Warwickshire. *Ca.* 1350.



44 BODIAM CASTLE, Sussex. *Ca.* 1400.



45 GREVEL'S HOUSE, CHIPPING CAMPDEN, Gloucestershire. Early Fifteenth Century.



46 THE TIMBER ROOF, WESTMINSTER HALL, LONDON. Ca. 1395. Hugh Herland, *master carpenter*.

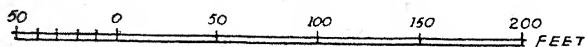
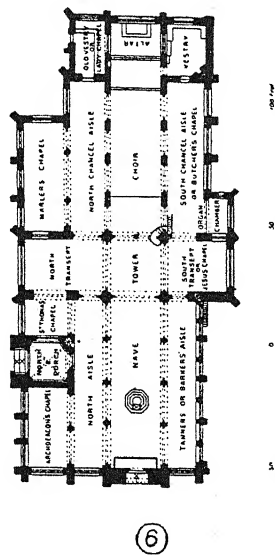
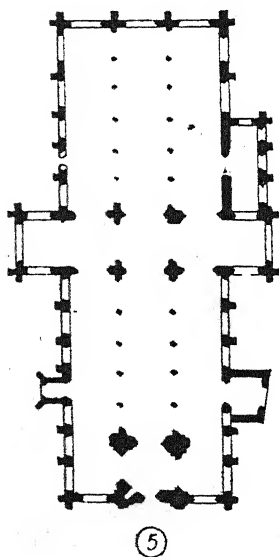
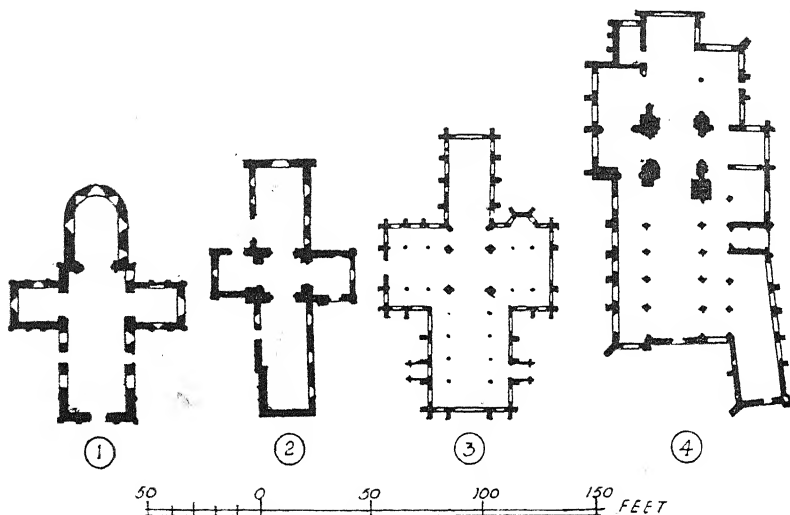
art was already lapsing into the florid graces of the *flamboyant*, English building grew steadily more sober. In the main this was an advantage, though the carving of the later fourteenth century was inclined to be dull and standardized—a process which continued until in the Tudor period the designs became so well known that they could be ordered by description, from commonly established types.

This sober outlook was partly due to a Puritan-like streak, and partly to the fact that the main building effort was passing to the parish churches, supported by a rising merchant class. The greater churches were now enormous, and could hardly hope to impose further burdens on a country one-third of whose wealth was already in the hands of the Church. It was the expanding industries which brought new wealth for church building, and it was only natural that that wealth should go to the city churches of London, Lynn, Coventry, Norwich, York and Bristol, or the village churches of the wool districts—Somerset, Suffolk (58) and the Cotswolds (69). The style was soberly English, and even regional in character, having no parallel development on the Continent.

At the beginning of the fourteenth century, however, this movement was not yet apparent, and the parish churches passed through a period of ostentation in style similar to that of the cathedrals and abbeys. This period may be considered as an extension of thirteenth-century development, resulting in rich elaboration, but with a materialist twist quite foreign to the earlier age. Patrington, Yorkshire, and Cley, Norfolk, will serve as examples of the phase at its best.

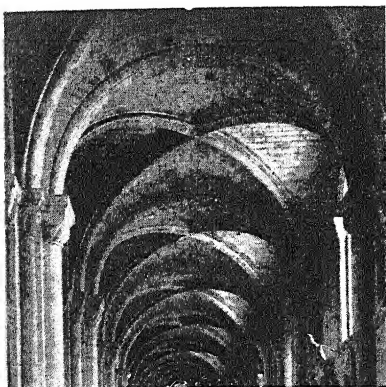
In planning the tendency was towards a plain aisled building, subdivided by screens and omitting even the chancel arch. It was the movement started at York, and the transept was finally to be jettisoned in the smaller churches, though not yet. At Coventry the fourteenth-century churches of Holy Trinity (41) (p. 50 (6)) and St. Michael (40) (p. 34 (9)), the cathedral, stand side by side (the latter now, alas, gutted). Holy Trinity retains transepts and central spire, while St. Michael's was planned in the newer mode with neither feature, tower and spire being western. It lacked certain qualities of composition and grace of the smaller church, but was a much more spacious and efficient building for its purpose. This type was developed even further in the fifteenth century, as in St. Nicholas, King's Lynn, but it did not change greatly in essence (see also p. 34).

The smaller churches of the later fourteenth century are marked by their large windows, subdivided on the principle introduced by the Gloucester masons. Mouldings become even smaller in scale, and are usually characterized by large "casements" or hollows, plain or enriched. There is a wealth of fine woodwork from this and the following century, though with few exceptions the rood loft, and all

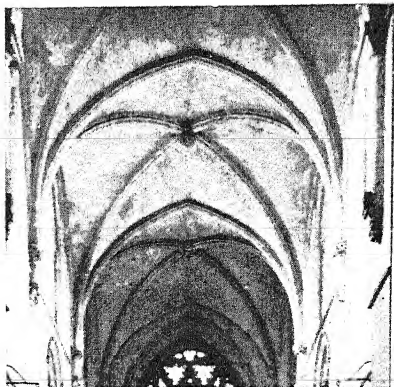


Parish Church Plans, Transeptal and Central Tower Type.

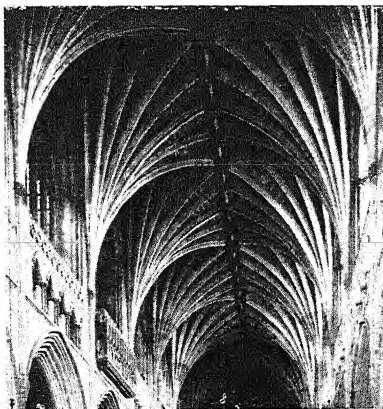
- (1) Worth (Saxon, transeptal apsidal); (2) Old Shoreham (twelfth century, aisled cruciform, central tower); (3) Patrington (fourteenth century, aisled cruciform, central tower); (4) Burford (twelfth-fifteenth centuries, cruciform, with central tower and complex chapels); (5) Newark (thirteenth-fifteenth centuries, cruciform, aisled throughout); (6) Holy Trinity, Coventry (fourteenth-fifteenth century, complex central-towered type).



a. QUADRIPARTITE: Dunstable Abbey, Bedfordshire. Mid-Twelfth Century.



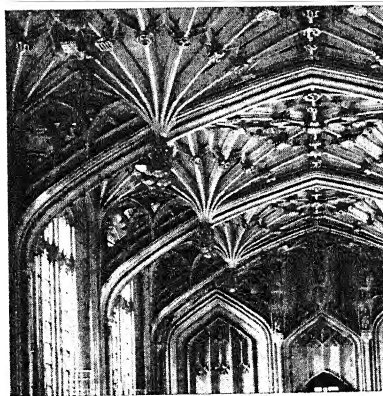
b. QUADRIPARTITE: St. Cross, Winchester. Late Twelfth Century.



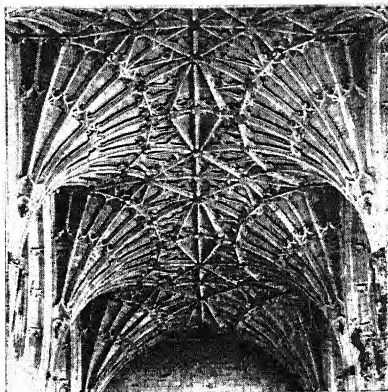
c. TIERCERON: Exeter Cathedral. Earlier Fourteenth Century.



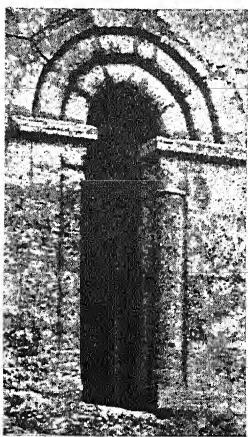
d. LIERNE: Gloucester Cathedral Choir. Ca. 1350.



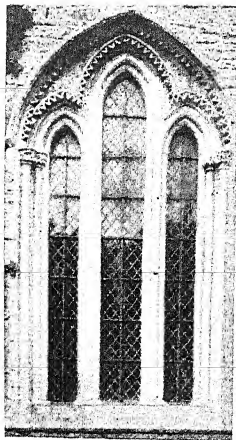
e. FAN VAULT PROTOTYPE: Divinity School, Oxford. Ca. 1475.



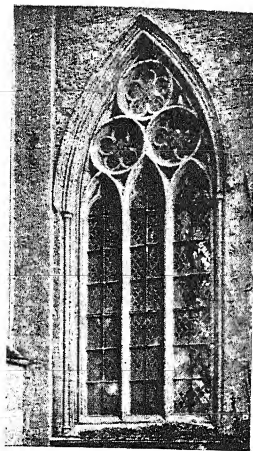
f. FAN VAULT: Sherborne Abbey, Dorset. Ca. 1500.



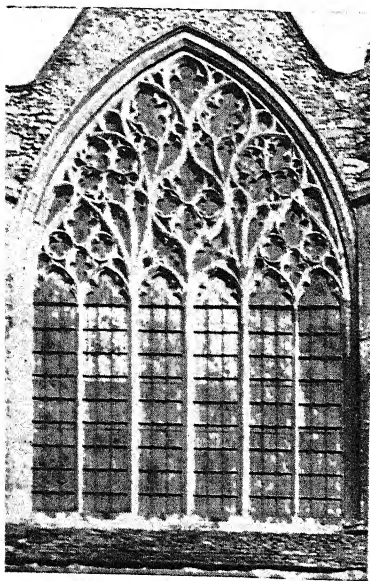
a. NORMAN : Castle Hedingham, Essex. *Ca.* 1130.



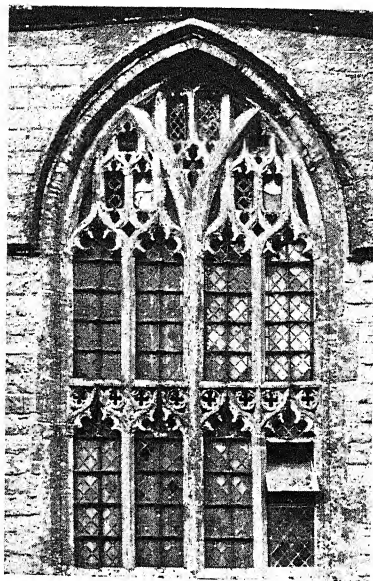
b. EARLY ENGLISH : Warmington, Northamptonshire. Thirteenth Century.



c. GEOMETRICAL : Dorchester Abbey, Oxfordshire. Late Thirteenth Century.



d. CURVILINEAR : Snettisham, Norfolk. *Ca.* 1340.



e. PERPENDICULAR : Currey Rivel, Somerset. Fifteenth Century.

too often the rood screen itself, have disappeared, their position marked only by the stairway which used to give access to them. Low-pitched, lead-covered timber roofs became common, though by no means invariable, and fine wood beams or trusses may frequently be seen. The arched type is fairly common, but most decorative of all is the "hammerbeam" roof in its many forms. Most of these belong to the following century, but the finest example of all, Westminster Hall, was built at the close of this period (46).

The hammerbeam roof exploits the possibilities of counterbalancing thrusts by placing a main arched truss over large semi-arched corbel brackets, so that the outward thrust of the truss is met by the inward "fall" of the wall brackets. This means that any outward push on the walls is transmitted to the foot of the wall post, where it is more easily buttressed. At Westminster Hall the great trusses are of the type technically known as "arched hammerbeam." The selection of suitable trees for their construction entailed a long search, and the timber was used green (*i.e.* unseasoned), the joints being constructed as far as possible to allow for subsequent shrinkage. Like the stone fan vault, the hammerbeam roof has no parallel on the Continent, but is an English invention.

Secular buildings were becoming more common. The Guildhalls of London, Coventry and Lincoln may be instanced, while a number of inns survive—*e.g.* The Angel at Grantham and the New Inn at Gloucester. Yet the churches continued to be used for many purposes now associated with lay buildings. In Exeter, public banqueting and drinking were forbidden in churches, especially in the choir (1358), but it was still common for them to serve as law courts, town halls and schools, while in the North they also served as fortresses.

Houses still fell into the three main categories of manor-house, cruck house and hovel, though the upper category tended to spread down the social scale, the cruck house being elaborated into forms more usually associated with the manor, as in Kentish yeomen's houses such as Wardes, Otham, or Synyards (of the following century) (60). At the lower end of the scale it was still possible for the Scots, upon finding their houses laid waste, to boast that "with six or eight stakes they would soon have new houses" (Froissart). The cruck house at last appears "in the flesh"; an excellent example has come down to us in "Teapot Hall," near Scrivelsby, Lincolnshire (50). The chimney is an addition. The roof of this tent-like house comes right down to the ground. It is thatched, except for a few courses of stone slates at the eaves, and the bower or sleeping chamber is a mere loft approached by a ladder such as one can still find in use on Holy Island. One can appreciate the well-known line of Chaucer, "ful sooty was hir

bour and eek hire halle"; but it is only fair to state that the antiquity of "Teapot Hall" has been questioned, though the author is not aware of any definite evidence at variance with the above statement.

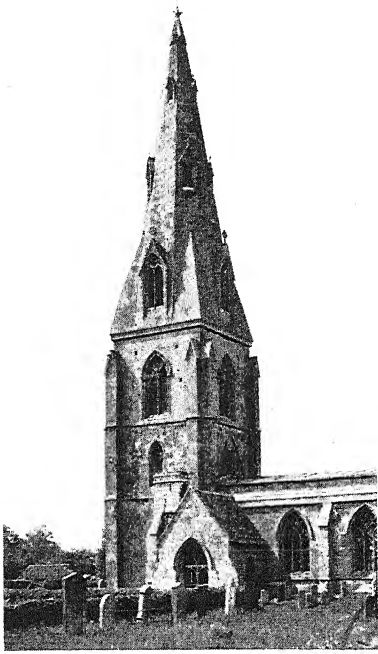
No other example is known to remain which has the roof coming right down to the ground, but crucks can occasionally be seen in the gable walls of old cottages, and may occur in unexpected cases where the exterior has been refaced. Examples occur at Haughton, Staffordshire; Didbrook, Gloucestershire (51); and Stoneleigh, Warwickshire; the latter having been extended eastward about 1913, and the crucks re-fixed. These are probably fifteenth-century examples, but may be earlier. Obviously the curved cruck gave better headroom, but even this could be much improved by using the forks merely as trusses and building the roof off them to give a wall about 6 feet high under the eaves. This derivation of the mediæval roof truss seems fairly clear in the use of arch, beam and post, rather than tie or hanger.

Chimneys may possibly have been more common than has been suspected, as the early ones were little more than wattle and plaster hoods leading to an opening, and might easily disappear without leaving much trace. Yet the chimney seems to have been uncommon in remote places even in the sixteenth century, as far as may be judged from contemporary references. The entrance to the single room, or hall, of the small house was protected by a short screen or "speer" to keep out the draught. Even in London the keeping of pigs or cows within the house was not forbidden until 1419.

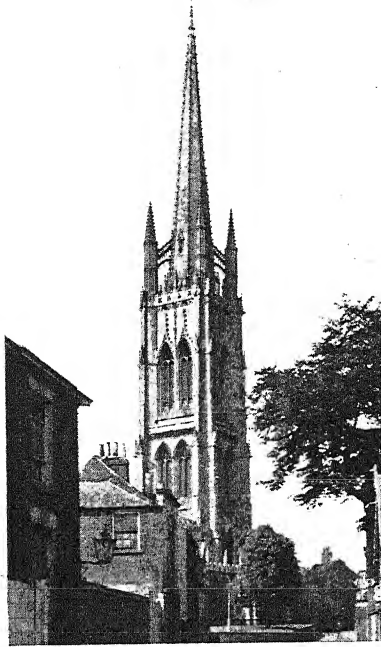
The increasing luxury of the merchant classes is shown by the following undertaking by Simon de Canterbury, carpenter, in 1308, to make "at his own proper charges down to the locks, for William Hanningtone, pelterer . . . a hall and a room with a chimney, and one larder between the said hall and room, and one sollar over the room and larder; also one oriole at the end of the hall, beyond the high bench and one step with an oriole from the ground to the door of the hall aforesaid, outside of that hall; and two enclosures as cellars opposite to each other, beneath the hall, and one enclosure for a sewer with two pipes leading to the said sewer; and one stable . . . between the said hall and the old kitchen, and twelve feet in width, with a sollar above such stable, and a garret above the sollar aforesaid; and at one end of such sollar there is to be a kitchen with a chimney." Payment was to be made partly in cash and partly in kind.

The growing practice of eating in private was condemned by Langland in *Piers Plowman* (c. 1362). Much later it was to be deprecated even by Henry VIII.

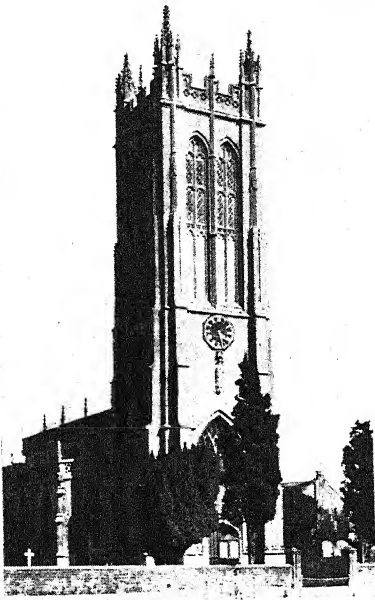
Wall hangings of tapestry, wool, or canvas were now usual in



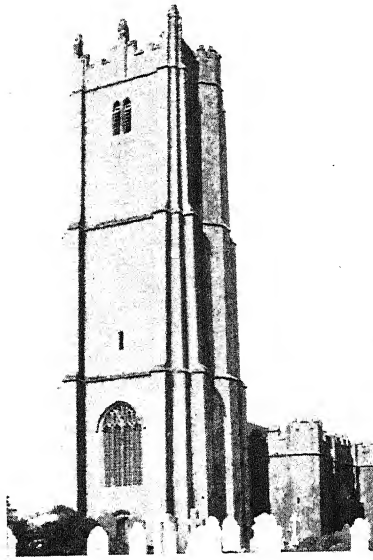
a. THRECKINGHAM, Lincolnshire. Thirteenth Century.



b. LOUTH, Lincolnshire. Tower 1445-1500. Spire 1501-1515.



c. EVERCREECH, Somerset. Fifteenth Century.



d. IPPLEPEN, Devon. 1440.



50 TEAPOT HALL, SPILSBY, Lincolnshire. Probably later Fourteenth Century.



51 COTTAGE CRUCK' CONSTRUCTION, DIDBROOK, Gloucestershire. Probably Fifteenth Century.

larger houses. The hall was still the main apartment, and was to continue as such for another two centuries. The typical arrangement of hall, buttery, pantry and kitchen can still be traced, not only in surviving houses and castles but in inns and colleges.

The golden age of castle building had passed early in the century, for not only had the introduction of cannon rendered the castle, if not obsolete, at least obsolescent, but also the towns were growing more important than the nobility. As the fully defensive castle had always been extremely uncomfortable to live in, the opportunity to escape from the extremities of military science was welcomed, and the castle soon gave way to the fortified manor. Maxstoke, Warwickshire, for instance, really falls under this category despite its imposing walls and towers, which are typical of the fashion for retaining the paraphernalia of the fortress, though the real need for it had passed (43). Of the few genuine castles built late in the century, Bodiam, Sussex, is the best known, and was planned to guard the district against possible French raids (44). Its plan shows the hall entrance placed axially opposite the gateway of its quadrangle, an arrangement characteristic as much of the late mediæval manor as of the castle. Another late castle is the little-known one of Nunney in Somerset, of which there are considerable remains. Some of the older castles also increased their defences, particularly in the North, where such strongholds as Belsay foretell the "pele" tower of the following century. At Warwick, the barbican and two rather continental-looking towers were added to the curtain, in contrast to nearby Kenilworth, which was elaborating its living apartments. In the fourteenth century this was the more common process, and we may note the interesting case of Haddon, Derbyshire, which started as little more than a strong tower, to which were added buildings of an increasingly domestic character during several centuries (42). The present period saw the emergence of the hall proper.

Town defences naturally tended to follow castle models. The town wall was defended by a series of towers, and its gates by barbicans. Another century would see the practice of building chapels over gateways which were no longer considered essential for defensive purposes (*e.g.* at Warwick), but peace was not yet sufficiently assured. By the aid of fines reluctant burghers were persuaded to keep the walls in repair, the ditches clear, and the approaches free from hut or lean-to. Nor should it be forgotten that the Church, too, played its part, for important establishments were themselves walled, and might form an appreciable portion of a city's defences, as in Lichfield and the Prior's domain at Coventry. In the towns the streets were narrow, often too narrow for vehicular traffic, and tended to radiate from the market-place to the walls, on the inside of which ran broad alleys for military access. There is no

survival in this country to compare with such examples as Carcassonne or Augues Mortz in France, Rothenburg in South-west Germany or Visby in Gotland, but some fragments remain, notably at York and Chester.

The typical late-mediæval timber town house made the most of its cramped site by overhanging its upper floors to get more space. This arrangement had the added convenience for the occupiers that they could empty their slops from the upper windows directly into the gutter, which commonly occupied the centre of the alleyway—a practice not always appreciated by the passer-by. “Siena, a City in Tuscany, not having drains, wants a very great help to Cleanliness ; by which Means the Town not only stinks every Night and Morning, when People throw their Nastiness out of the Windows, but even in the Day Time it is seen lying about in the Streets.” So wrote Alberti, the great Italian architect, in the following century, and as Italian standards were generally far higher than was usual in Europe, his description of Siena would probably apply to many an English town without exaggeration.

Trades went by districts, and even to this day their locality is recorded in street names. “Ironmonger Lane,” “Butcher Row,” “Poultry” or “Lombard Street” (where the Bankers dwelt) are examples. As has already been mentioned, shops were often sunk, and encroachments on the public way were common, action being taken by the authorities with more or less success in such cases. It would appear that the origin of the projecting upper floors already mentioned was to protect a booth or shop below, for the shopkeeper commonly used a lean-to structure for the display of his wares—doubtless a relic of the days when he set out his stock in front of his door. The overhanging upper floor continued in favour, even in London, until the early seventeenth century, when it was prohibited by an edict of James I in order to improve sanitation and lessen fire risks.

One other interesting feature of mediæval England was the external use of colour wash. The Tower of London and St. Alban’s Cathedral we know to have been whitewashed, and the Round Tower of Windsor at the time of Edward III was colour-washed, and known as the Rose Tower.

THE FIFTEENTH CENTURY

THE most significant movement in architecture in the fifteenth century took place in Italy, where Brunelleschi started a revival of classical Roman forms which led to the European Renaissance in building. The first of the revivals, it was ultimately to form a dangerous precedent for the resurrection of past styles, which has made the past hundred years at once a collector's heaven and an architect's hell. However, in the *quattrocento* no such nightmare had as yet appeared, and the grandeur that was Rome began to blossom again in a century which saw the work of Ghiberti, Donatello and Da Vinci, and the birth of Bramante, Raphael and Michael Angelo.

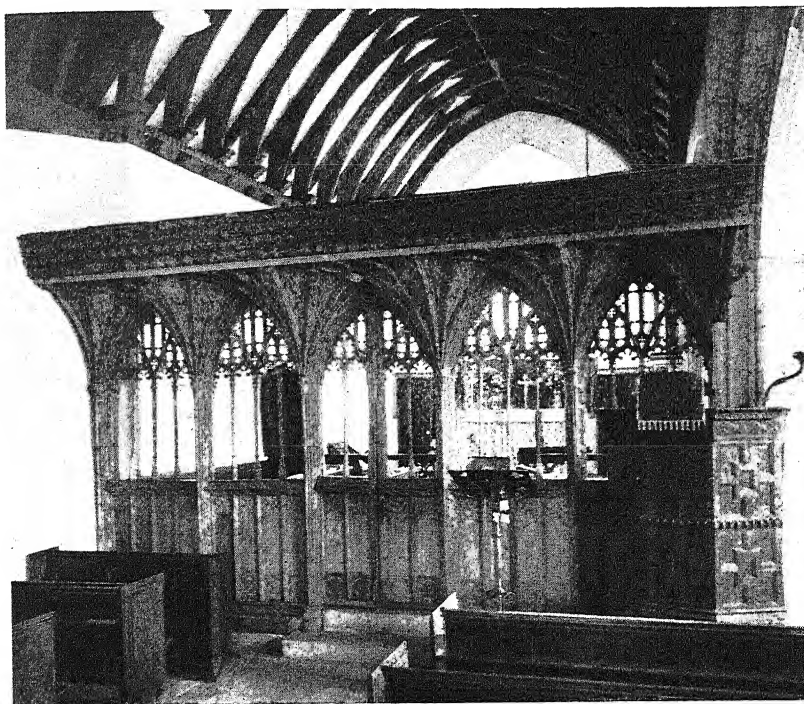
The comparative isolation of the times is demonstrated by the fact that no hint of this great movement is visible in contemporary English work which, starting from the late Gothic of the fourteenth-century Plantagenets, developed slowly into the not so very different style of the early Tudors. In the great cathedrals work was on a much smaller scale than previously, and consisted largely of the addition of towers, vaulting, clerestories, and chapels or tombs. Of towers (central mainly) we may mention Canterbury, Durham, Wells and York. Many cathedrals were originally planned to have three spires on the Lichfield model (*e.g.* Durham), or actually had them and have since lost them (*e.g.* Lincoln). Such spires would usually be built of timber, covered with lead or with wooden shingles. Vaulting of the period can be seen in the cathedrals of Norwich and Oxford. The finest vaulting forms, which rival, if they do not surpass, those of any other period, are the elaborated lierne type, usually rather flat, and the fan vault in its many forms. The former is exemplified at St. George's Chapel, Windsor (64) (lierne and barrel), and the Beauchamp Chapel, Warwick; the latter at Sherborne, Dorset (47, *f*), and the Cathedral and Divinity School at Oxford (47, *e*), though the purist would characterize the last two, particularly the cathedral, as not being "true" fan vaults. They are none the less glorious on that account.

Windows provide the major theme of all this late Gothic work, their tracery frequently being extended over both wall and vault surfaces, and even over external walls, as at Warwick. Mouldings have become rather stereotyped, their most distinguishing feature being the ever recurrent large casement or hollow, sometimes enriched with ornament, particularly, of course, in the South-west. Stained glass is lighter in colour, with much use of white and gold.

When the builders of the Beauchamp Chapel, Warwick, wanted warmer tints, they specified that the glazing should be "glasse of beyound the seas" ("the said John Prudde doeth covenant to glasse all the windows in the new Chapel in Warwick with glasse of beyound the seas, and with noe glasse of England, and that in the finest wise with the best, cleanest, and strongest glasse of beyound the seas that may be had in England, and of the finest colours of blew, yellow, red, purple, sanguine, and violet and of all other colours that shall be most necessary and best to make rich and embellish the matters, images, and stories that shall be delivered and appointed by the said executors by patterns in paper, afterwards to be newly traced and pictured by another painter in rich colour at the charges of the said Glasier. . . . The Executors paying the said Glasier for every foot of glasse iis and so for the whole xxiiiij li. xjs. xxijd." (1447)). The same chapel shows excellent examples of carving and sculpture of the period (55), which we know to have been carried out by some of the most competent craftsmen in the country. The figure of the Earl—Richard Beauchamp, Governor of Calais and Regent for Henry VI—is an actual portrait made from a drawing, and not a stock model as was usual with earlier tombs. (" . . . William Austen, Citizen and Founder of London, doth covenant to cast and make an image of a man armed, of fine latten, garnished with certain ornaments, viz. with sword and dagger, with a garter, with a helme and crest under his head, and at his feet a bear muzzled and a griffin, perfectly made of the finest latten, according to patterns . . ." (1450).) The official opening was delayed from about 1460 to 1472 by the Wars of the Roses, which must have caused a good deal of disturbance to building work during the century.

Of the larger churches, Bath Abbey and St. Mary Redcliffe, Bristol, may be mentioned, while many of the fine East Anglian churches belong mainly to this century (Long Melford (58), Lavenham). The hammerbeam roof reached its greatest popularity in this period (Trunch, Knapton, March) and was rivalled by truss roofs of almost equal elaboration. It is in the Eastern Counties that we find the richest open roofs. In contrast to them the South-west preferred heavily carved ceilings of the barrel-vault type, with decorative ribs and bosses, and plaster panels. In church woodwork the South-west, similarly, preferred a rich "all-over" decoration (57), and the Welsh roodlofts are covered with delicate lacework patterns. The fifteenth century was the heyday of the Guilds. Art tended to be less religious, more commercial; less profound, more elaborate. But what it lost in discrimination it regained in popularity.

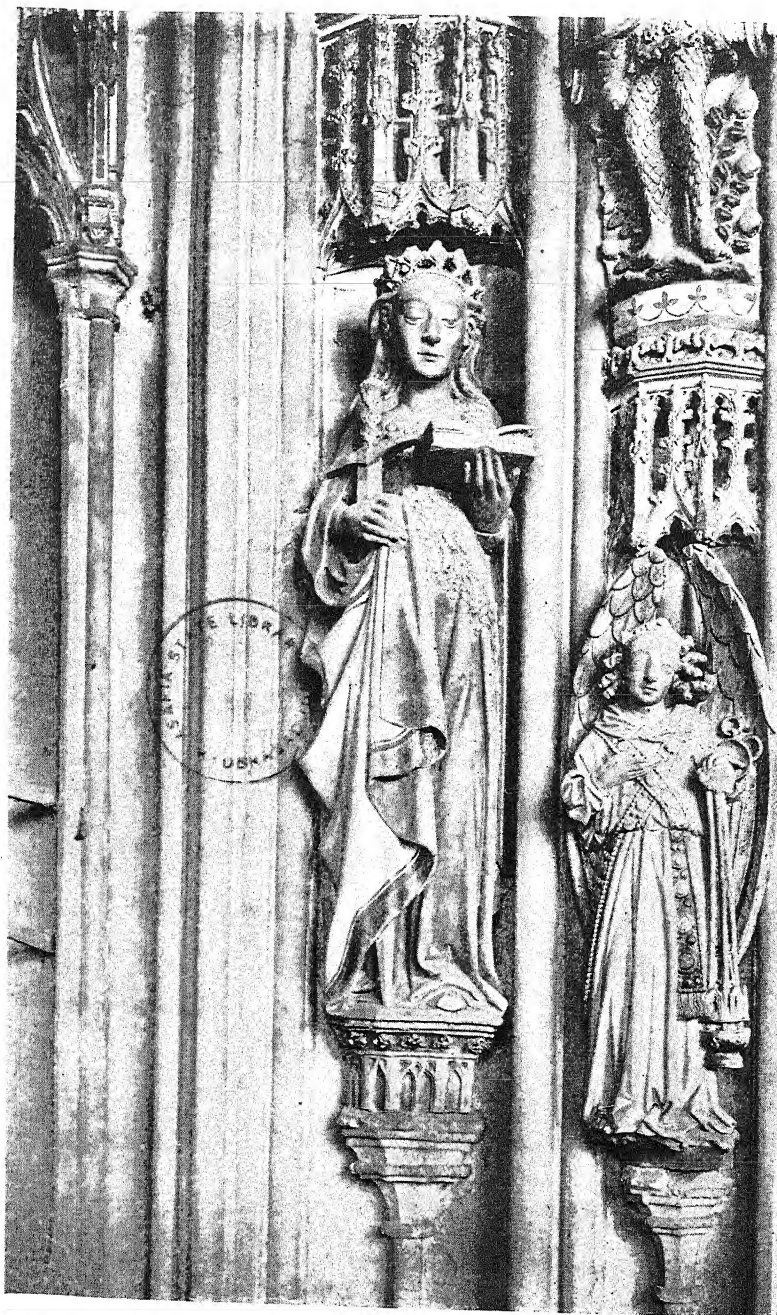
The larger parish church tended to become more and more a stone conservatory, with its giant windows and narrow buttresses



52 ROOD SCREEN AT TIMBERSCOMBE, Somerset. Fifteenth Century.



53, 54 PAINTED PANELS FROM CHURCH SCREENS AT (left) KENTON, Devon, and (right) EYE, Suffolk. Fifteenth Century.



55 FIGURES FROM JAMB OF EAST WINDOW, BEAUCHAMP CHAPEL, ST. MARY'S CHURCH, Warwick. 1450. (St. Catherine and Angel with Censer.)

(Stratford-on-Avon chancel (59)). As the century wore on, design grew somewhat stereotyped, though rich in detail. There was on the one hand a simplification of general planning (St. Nicholas, Lynn (p. 34)) and on the other hand a growing complexity of guild and chantry chapels (St. Michael, Coventry (40)). Rooms over porches were common, and were used by the Guilds (Cirencester (69)) or as schoolrooms (Warwick, now destroyed). The church porch had always been associated with lay activities. It often overlooked the market-place, and important bargains were sealed in it. At Coventry this tradition appears evident in the siting of the Guildhall of St. Mary (incorporating the Guilds' warehouses) immediately facing the south porch of St. Michael's Church. When St. Michael's was rebuilt in the late fourteenth and early fifteenth century, the Guildhall prevented extension to the south, and caused the nave to be pushed over to the north, although the west tower and spire had already been built in line with the chancel (*v. plan*, p. 34). Such resultant bending of the main axis between nave and chancel is a feature not uncommon in late Gothic churches, and is popularly attributed to a symbolic attempt to represent Christ's head leaning upon the cross. There seems to be no adequate foundation for such a theory, which appeared long after the period in question.

Another feature giving rise to popular fallacy is the "low side window," frequently appearing in the chancel at this time. It seems to have been used for ringing the sanctus bell for workers in the fields to hear when the host was raised at the celebration of Mass. The popular notion that it was a "leper" window is discounted by the fact that these poor outcasts were too much feared to be allowed even inside the churchyard. Such low windows belong either to the later mediæval period or the time of Archbishop Laud. "Hagioscopes" (squints) or apertures giving a view of the high altar from aisles, transepts or chapels are also not uncommon.

The late fourteenth and early fifteenth centuries witnessed the apotheosis of the tower and spire (St. Michael's, Coventry; Louth (49, *b*); St. John, Glastonbury; Wrexham, Canterbury, Wells, Gloucester, Beverley, Lincoln, Lavenham). In spire design the "broach" of the thirteenth and early fourteenth centuries (49, *a*) had long given way to the parapeted and pinnacled spire, with gabled window openings. In Somerset pierced stone screens are a feature of the belfry stage of the tower (49, *c*), while the staircase turret is marked externally by an octagonal corner projection, in contrast to Devon where the stair turret is sometimes placed centrally on one face of the tower (49, *d*).

These late mediæval parish churches are excellent examples of "functional" architecture. Everything is sensible and logical; unexciting, but full of a quiet charm, now enhanced by the mellow-



58 LONG MELFORD, Suffolk: a great Wool Church of East Anglia. 1479-1498. (The Tower is modern.)



59 THE CHANCEL, STRATFORD-ON-AVON, Warwickshire. 1465-1491.



60 SYNARDS, OTHAM, Kent. Fifteenth Century. (Dormer, Seventeenth Century.)



61 COTHAY MANOR-HOUSE, Somerset. Ca. 1480.



62 THE HALL, COTHAY MANOR-HOUSE, Somerset. 1480.

of the house. "Taking the chair" had then a literal meaning. Elaborate beds and a chest would very likely complete the furniture of the ordinary small manor, except for wall hangings which were now considered an essential, unless replaced by mural paintings. Panelling was beginning to appear, and the late fifteenth and early sixteenth centuries saw the variety known as "linen fold," from its patterned face, though the pedantically minded will find more exceptions than true "linen fold," which, properly speaking, eschews ribs and enrichments.

In the South and East brick was becoming common for house building, as may be seen at Tattershall, Lincolnshire; Oxburgh, Norfolk; and Hurstmonceux, Sussex. It even appeared in churches, as at Sandon, Feering, Layer Marney and St. Osyth, Essex.

For the small manor we must search for traces among cottages and farm buildings, for the time was already approaching when the master would build himself better quarters and relegate his old house to tenant or cattle. We can think of such places as Synyards, Otham, Kent (60); and Great Dixter, Northiam, Sussex. Many an old manor-house has thus come down in the world. One example must suffice—the well-known cottage at Bignor, Sussex (81).

Timber work reached its greatest glory in the South and East (*e.g.* Kersey and Lavenham, Suffolk (66, 67); Rye, Sussex). At this period, timbers were still kept fairly close together, the interspaces being filled with lath and plaster, wattle and daub (a rougher variant of the same theme), or less frequently with brick. In Cheshire and Lancashire elaborate and rather florid timberwork excels the South-eastern school in magnificence, if not always in good taste (*e.g.* Moreton Old Hall (77) and Rufford). Much of this work, however, extends into the following century. This timber architecture forms a part of the interesting regionalism of earlier building. Transport was not available to bring cheap building materials to remote districts, and each part of the country used the materials available on the spot—usually with the happiest results. Thus stone, brick and timber districts each developed their own traditions and appropriate detail. In the eastern counties and some parts of Berkshire even flint was used. At first flint walls were curved to avoid the difficulty of making corners, but later this was overcome by using stone quoins, and most elaborate effects were obtained by flint and stone inlays (*e.g.* Long Melford (58) and Lavenham churches). Regionalism was apparent not only in materials but in design, for there was less interchange of ideas among the general public, and a healthy provincialism promoted independent schools of design. Professor Prior has noted a variation in design according to the quarry from which masons came to work the stone. The cities also set their stamp on craftsmen, who tended to form a local "school" of design in the surrounding district.

In addition to churches and houses, many other buildings remain to tell us something of late mediæval life. There is the wonderful church porch at Cirencester, used for many years as municipal offices (69). There are inns such as The Star, Alfriston, Sussex; The Mermaid, Rye; The George, Glastonbury (63); or The Swan, Lavenham. Finally there are many fine tithe barns of the fourteenth and fifteenth centuries, where tithes paid in kind were stored during winter owing to difficulties of transport. A magnificent example is found at Great Coxwell, Berkshire, a veritable cathedral among tithe barns; others occur at Glastonbury; Bradford-on-Avon; Ashleworth, Gloucester; and Abbotsbury, Dorset.

The subject of mediæval sanitation is also an interesting one, of which all too little is known, though a certain amount of information is available. The use of private wooden bath tubs seems to have been general among the upper classes, but if we are to judge by contemporary illustrations of ladies chatting to their men friends while bathing, there was not much false modesty, though the bath cover was introduced in the fourteenth century—apparently for just such occasions. Public bathing was considered undesirable, as leading to immorality, but bathing, as a symbol of purity, played an important part in the inauguration of knights.

The fifteenth century saw a big improvement in water supply to the London Charterhouse, when a conduit was laid there from a spring in Islington; yet Canterbury had installed something of the sort as early as the twelfth century. At Durham "Within the Cloister Garth, over the Frater House door, was a fair Laver, or conduit, for the Monks to wash their hands and faces, being round, covered with Lead, and all of Marble, saving the outermost wall, within which they might walk round about the Laver. It had many Spouts of Brass, with twenty four Brass Cocks, round^d about it, having in it seven fair windows of stonework, and over it a Dovecote cover'd with Lead, finely wrought, as appears to this day. Adjoining to the East side of the Conduit door hung a Bell to call the Monks at eleven of the Clock, to come and wash, before dinner, having their Closets or Ambries on either side of the Frater House door, on the outside within the Cloister, kept always with clean Towels to dry their hands. There was also a large and decent place, adjoining to the West side of the said Dorter, towards the water, for the Monks and the Novices to resort to, called the Privies, two great Pillars of Stone bearing up the whole floor thereof. Every Seat and Partition was of Wainscott, close on either side, so that they could not see one another when they were in that place. There were as many seats on either side as there were little windows in the Wall. . . ." (*Ancient Rites and Monuments of the Monastical and Cathedral Church of Durham*, 1662).

The sanitary wing of monastic buildings was commonly attached

to the dormitories or "dorter," and was called the "rere-dorter" or "necessarium." As already mentioned, the seats were built over a deep channel or chamber, through which a stream often flowed. Such drains may be responsible for the fantastic stories of secret passages which are still treasured in some localities. The sanitary arrangements of the monasteries were luxurious compared with ordinary conditions. In castles, we have already seen how closets (or garderobes) were planned in the thickness of the walls, sometimes in quite an elaborate manner as at Langley Castle, Northumberland. Where no running water was available great pits were dug, the cleaning of which was an unpleasant and Herculean task. An interesting sidelight is thrown on mediæval habits by the finding of buckthorn seeds in the drain of St. Albans. These were used as an aperient, and must have been in frequent demand to leave traces over so long a period.

The ordinary citizen could use a public latrine, but the supply of these was inadequate, and they were often insanitary. As private privies were not always provided, the use of household articles which were emptied into the street must have been all too common. It is, for instance, recorded that early in the fifteenth century, all little rents of the "Swan" in Basinghall Ward, of the City of London, were without privies, and that filth and liquid were being thrown out of doors to the annoyance of church-goers and pedestrians.

Perhaps the first example of municipal housing occurred under Henry VIII, when powers were given to local authorities to rebuild house property which had fallen into disrepair and confusion owing to the Wars of Succession (*i.e.* Wars of the Roses).

THE SIXTEENTH CENTURY

THE sixteenth was the century of the Tudors, and saw significant changes in architecture. It opened in the spirit of the Middle Ages, though Columbus and the Cabots had already crossed the Atlantic and France had succumbed to the new classical manner introduced from Italy—or at least to a native hotch-potch of its motifs. Travelers returned from Italy full of admiration for the fine paved and drained cities they had visited, but there was as yet little sign of any striking change in English architecture.

Churches were still building, in spite of four hundred years of extension, though people were growing a little tired of the rule of Church and guild. Henry VII's Chapel at Westminster Abbey (1500–12) and King's College Chapel at Cambridge (1508–15) (67) were indeed more original and splendid than anything that the mediæval masons had yet produced. Both have magnificent fan vaults, the former carried on partly concealed arches, and justly considered one of the supreme achievements of Gothic architecture. Other important works were also in hand, notably Bath Abbey rebuilding (68), Winchester presbytery, Rochester Lady Chapel, Cirencester nave and St. Catherine's Chapel, and a host of screens, tombs and chantries.

The first blow fell in 1524 (only three years after Henry VIII had received from the Pope the title of "Defender of the Faith") when a few minor monasteries were suppressed. The threat was evident, and little further building work was undertaken by the churches, though Bishop West's chapel at Ely (1534) (70) belongs to this period, and is architecturally interesting for the use of classical detail, no doubt the work of foreign craftsmen. The King himself had already introduced such foreigners, chief among whom was Pietro Torrigiano, designer of Henry VII's tomb, and famous as the man who broke Michael Angelo's nose in a students' quarrel. He seems to have been a great boaster, with a proper contempt for the "barbarous English."

It seems probable that the Italians were rare visitors, and that most of the itinerant craftsmen who earned a living by carving classical detail were French or Dutch, with a sprinkling of English imitators. Evidence of their handiwork can be seen in occasional church screens, such as those at Christchurch, Hampshire and Winchester Cathedral, or in tombs such as that in the Cappers' Chapel at Coventry Cathedral. The fine screen of King's College Chapel (1526–34) (65) looks as though it were wholly Italian work. Foreigners were not liked, and later, under Elizabeth, many of them



63 THE GEORGE INN, GLASTONBURY, Somerset. Late Fifteenth Century.



64 ST. GEORGE'S CHAPEL, WINDSOR CASTLE. THE CHOIR. 1473-1537.



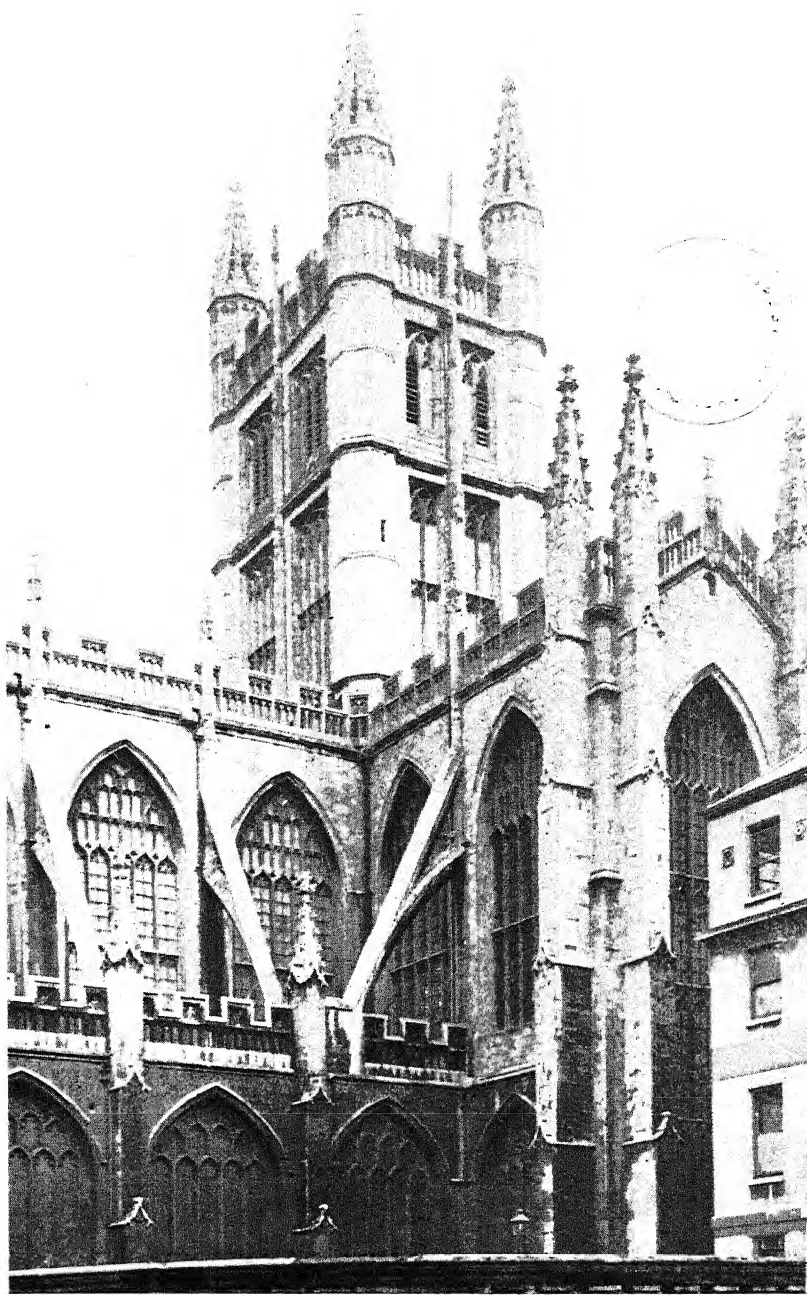
65 KING'S COLLEGE CHAPEL, Cambridge. Late Fifteenth and early Sixteenth Century. (The Screen is of Italianate Renaissance design.)



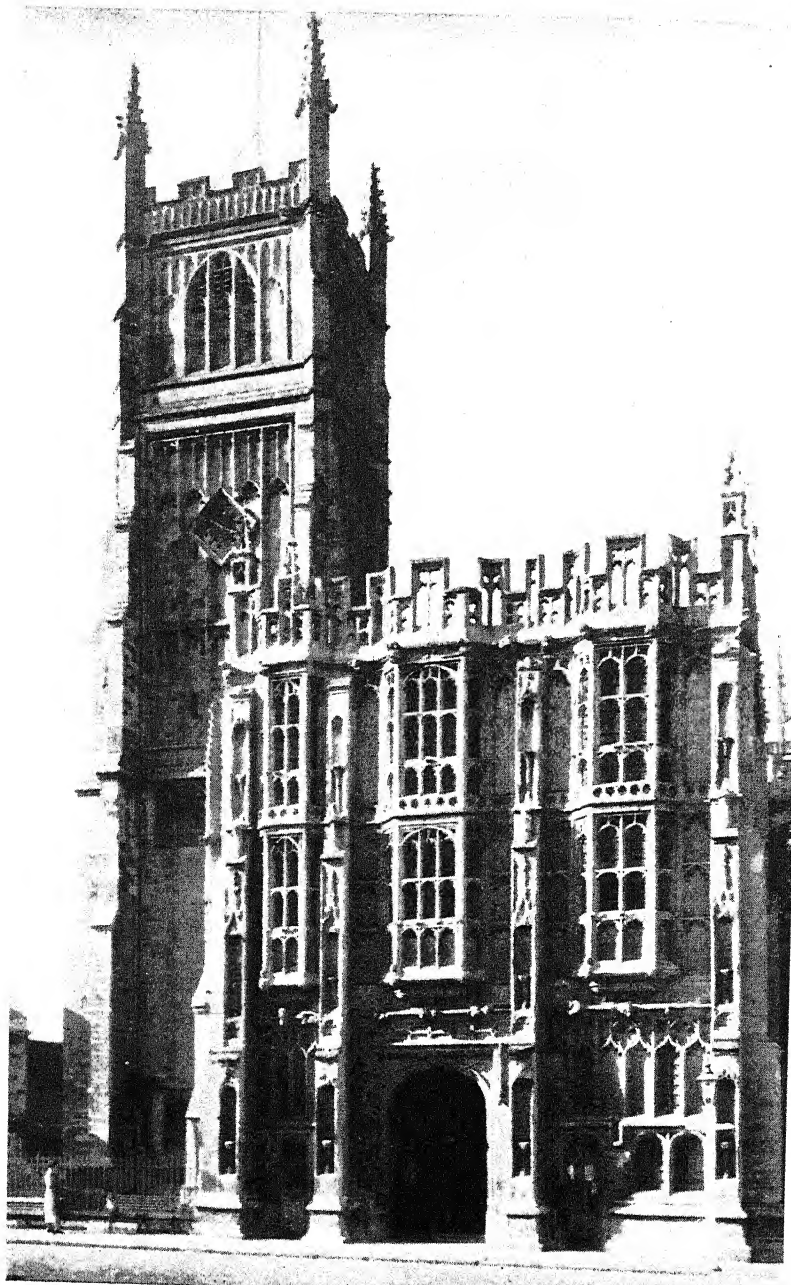
66 KERSEY Suffolk. A former Cloth-weaving Village, little altered since Tudor times.



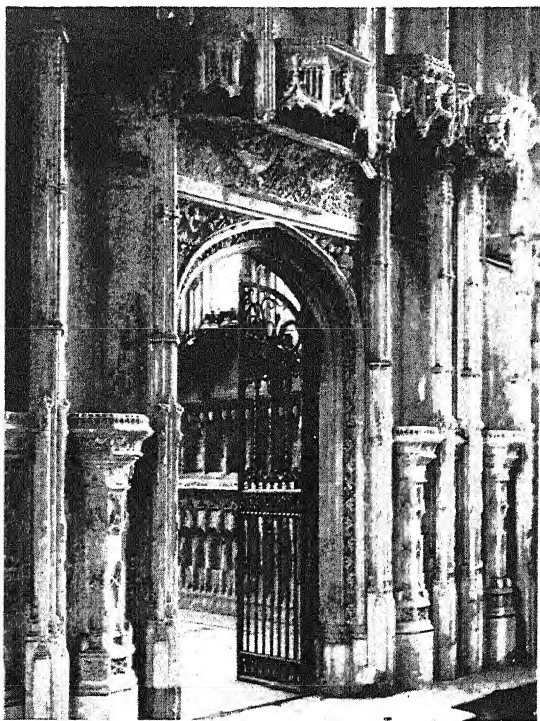
67 LAVENHAM, Suffolk. A small Tudor weaving town of Fifteenth and Sixteenth Century timberwork.



68 BATH ABBEY, Somerset. The Tower and Crossing from the south-west. 1500-1540.



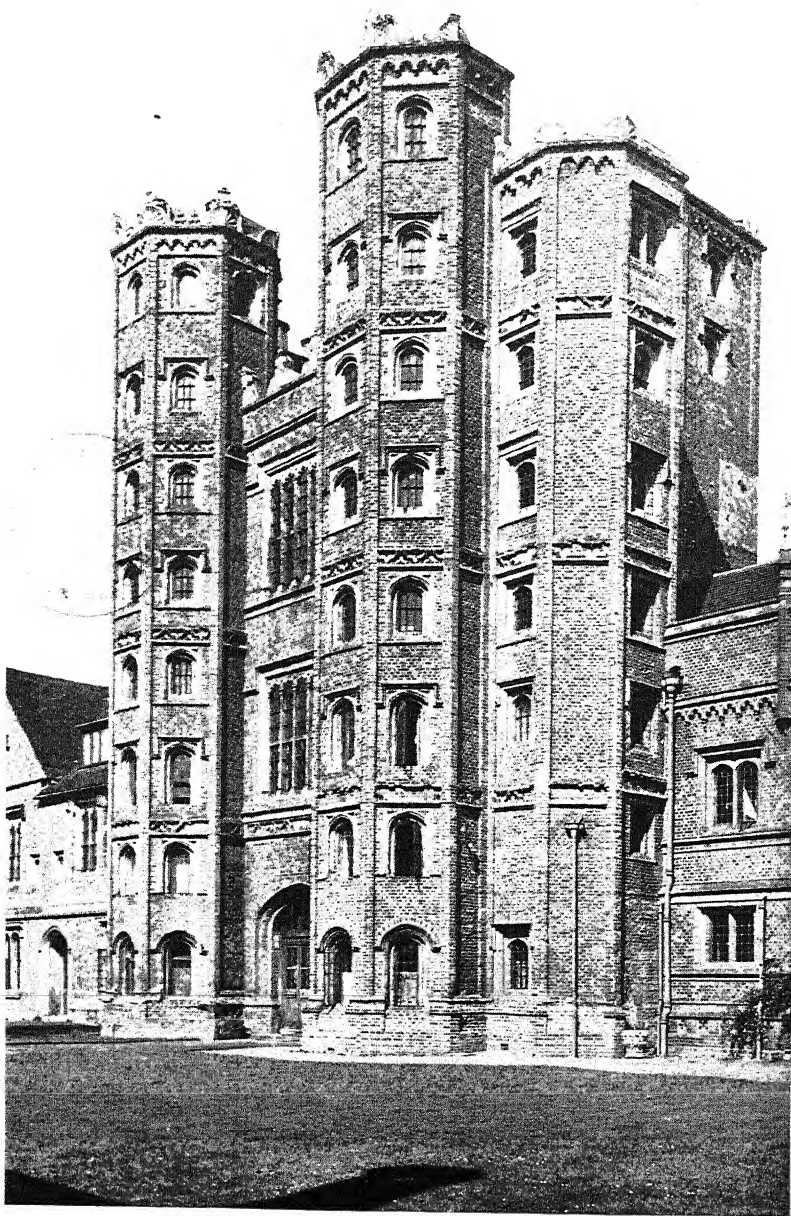
69 THE PORCH AND TOWER, CIRENCESTER CHURCH, Gloucestershire. Early Sixteenth Century.



70 BISHOP WEST'S CHAPEL, ELY CATHEDRAL. *Ca.* 1535.



71 TOMB OF THOMAS HOWARD, DUKE OF NORFOLK, AND HIS WIFE,
FRAMLINGHAM CHURCH, Suffolk. 1554.



72 THE GATEHOUSE LAYER MARNEY HALL, Essex. Ca. 1520.

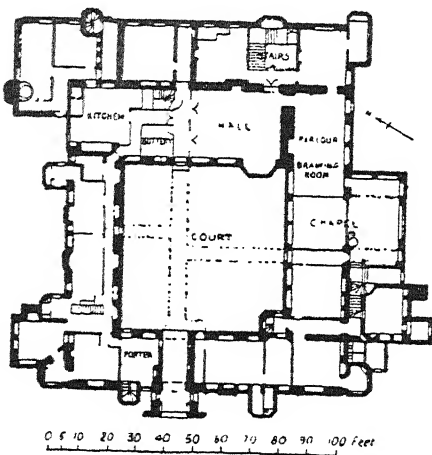
were driven out by popular agitation ; but the Italians mostly left before the middle of the century, doubtless as a result of the religious situation.

It was not until 1536 that the lesser monasteries were suppressed as a whole, the greater following three years later. This period is not unnaturally marked by an increasingly secular outlook, even in the parish churches. At the beginning of the century the parish churches had been as busy as ever with building work. One may instance Lavenham and Long Melford, Suffolk (58) ; the Cotswold wool church of Cirencester (69) ; Louth spire, Lincolnshire (49, *b*) ; and many of the Somerset towers (49). Now the tendency was for work to be diverted to tombs, which consequently become very elaborate, and to private houses. The Church was already adequately housed, and the rich no longer felt impelled to give large sums for further elaboration. They preferred rather to improve their own houses, or to found some school or charity, many of which date from this period. It is only fair to say that previously such educational and charitable works, so far as carried out, had been the responsibility of the Church, and it was sometimes necessary to found new establishments only because the old had been despoiled. Nevertheless the process was inevitable, for the Church had grown top heavy and rotten, and nothing but wholesale removal could let in the fresh air necessary for social rejuvenation.

Revolution in fact was in the air, and architecture was to be no exception, for it was to remain in a state of flux for over a hundred years. It seemed as though the attack on the Church had brought the whole edifice of mediæval life, thought and art down with it. The gentry were no longer content with the primitive if picturesque houses of their fathers. They wanted more space, larger windows, increased privacy, and an acquaintance with the classical canons which were becoming the hall-mark of education. They bought foreign books of classical detail and played the amateur architect, as Lord Burghley did at Stamford, possibly with the assistance of John Thorpe, the well-known "surveieur."

It cannot be said that the result was entirely happy, for the architecture of the period achieves ostentation and vulgarity unknown to the Middle Ages even in its worst moods. Fortunately the use of natural and local materials has permitted time to veil with mellowness the clumsy exuberance of ornament fashionable among the rich, so that, for us at least, it never reaches the depths of degradation associated with the nineteenth century. Possibly also the eighteenth-century craze for re-fronting town buildings removed some of the worst vulgarities. Generally speaking, Elizabethan building was still based on Gothic principles, and where ornament was slight the result was excellent, as (*e.g.*) at Chastleton, Oxfordshire, the Wiltshire group *e.g.* Boyton and

Stockton, and examples in Northamptonshire: Lilford, Glington and others. Where, however, wealth or caprice dictated enrichment and display, this was added without much regard to suitability, and was obtained



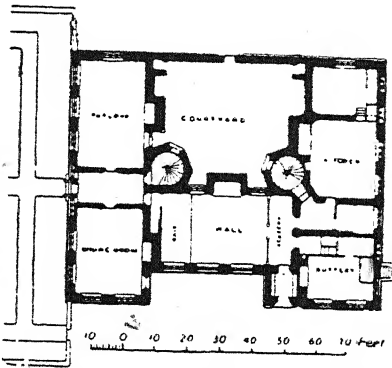
Compton Wynyates, Warwickshire.

from Flemish plates of bastard classical designs, such as those by Vredeman de Vriese and Wendel Dietterlein, which were often imperfectly understood by the craftsmen concerned. Compare with the houses just mentioned Wollaton, Nottingham, and the Duke's House, Bradford-on-Avon. No longer was ornament the natural flowering of design, but something applied for the sake of fashion. So long as design remained Gothic and ornament classic no very satisfactory solution

could be expected. The situation was perhaps the natural outcome of a rift between the craftsman, who would not drop his old habits, and the amateur, who had more enthusiasm than knowledge. Not until late in the following century did the classic revival once again bring about that uniformity of general principles necessary to good architecture.

Thus, early in the sixteenth century there is little sign of the impending revolution in such houses as Compton Wynyates, Warwickshire; the older portion of Thame Park, Oxfordshire; or the Tribunal House at Glastonbury, whereas the new style had already appeared in detail at Layer Marney, Essex (72), and Sutton Place, Guildford, the latter two houses exemplifying the use of terra-cotta, introduced and used almost exclusively, by Italian workmen.

The times were rough but hearty, as might be expected in an age that produced both Rabelais and the "cod-piece." The regulations



Eastbury House, Barking: a sixteenth-century brick manor-house.

of Henry VIII's household stipulated that Officers of the Bed Chamber "will not caress the maids on the stairs, as many household utensils are apt to be broken as a result. Such pages as seduce the maids of the King's Household, so that they become mothers, shall pay a fine of two marks, for the benefit of His Majesty, and shall go without beer for a month. . . . The cook shall not engage ragged assistants, who run about almost naked, and who sleep on the floor, or before the kitchen fire. . . . The pewter service is too expensive to be used every day. The greatest care must be taken of the wooden trenchers and of the pewter spoons" (*Le Livre des Singularités*).

My Lord and Lady Percy's breakfast late in the preceding century was "a loaf of brede in trenchers, two manchets, one quart of bere, a quart of wine, half a chyne of muton, ells a chyne of beif boiled" (Warner's *Antiquitates Culinarie*). It is perhaps hardly surprising to find Erasmus describing the English house with some disgust: "the floors are commonly of clay, strewed with rushes, under which lies unmolested an ancient collection of beer, grease, fragments, bones, spittle, excrements of dogs and cats, and everything foul."

Wealthier households were large, with a multitude of servants, and the dress of the gentry was imposing, as may be seen in the pictures of Holbein and his school.

The old master mason and carpenter survived right through the following century, though already men were beginning to describe themselves as architects and surveyors. The Countess of Shrewsbury (Bess of Hardwick) paid twenty shillings to Robert Watson (Master mason) in 1551 for a "platt" or plan of Chatsworth. In 1563 John Shute, "Paynter and Archytecte," published the first English book on architecture (*The First and Chief Groundes of Architecture*). He had studied in Italy. Robert Smithson of Wollaton, "Gent, architector and surveyor," probably designed Wollaton Hall, Nottinghamshire, an original if clumsy composition, and John and Huntingdon Smithson (possibly his son and grandson) were associated with the equally original and more successful design of Bolsover Castle, Derbyshire, early in the following century.

Rather better known is John Thorpe, who left behind a sketch-book containing drawings of many houses of the period. Controversy has raged over how far these represent Thorpe's own designs, and how many were actually carried out. Some are undoubtedly surveys of completed houses, others purely imaginary. Scholars who at first inclined to credit Thorpe with the authorship of all the designs now tend to deny him the credit for any of them. All we can say definitely is that he was the original designer of the earlier part of Kirby Hall, Northamptonshire (76), "Whereof I layd the first stone 1570" (which set a style for the whole district for many years), and that he later became Crown

Surveyor. It is even possible that there were two Thorpes, father and son, who have been partly confused. Judged by Kirby Hall alone he was a most gifted and sensitive artist, who in a more favourable age would have left a much greater reputation. His misfortune in working in a period of compromise has unduly obscured his gifts of composition and even elegance.

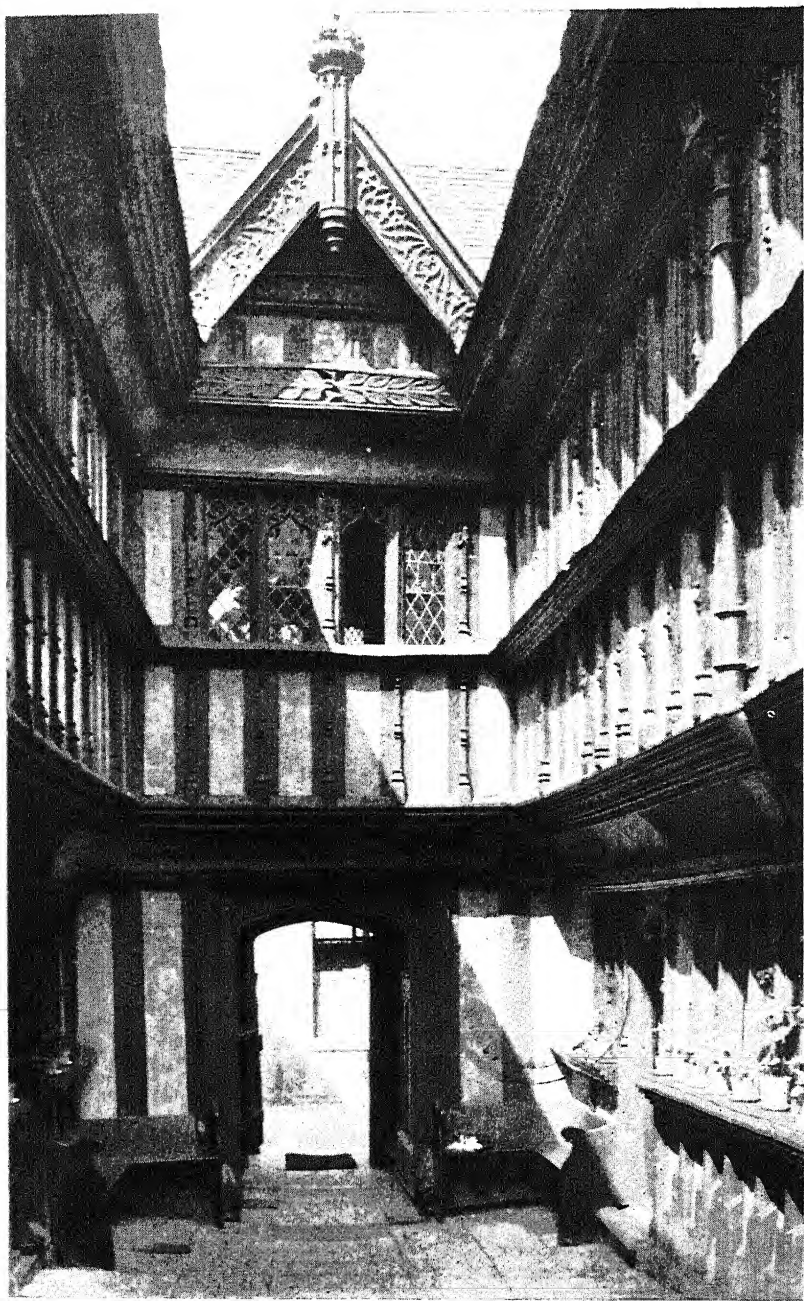
Another house of great refinement and merit is Montacute in Somerset (1580-1600), whose designer is unknown. The formal garden is interesting, its main lines and little garden houses preserving the courtyard plan while its raised walks derive from the traditional rampart walk of the castle. Not so happy was Burghley House, to which we have already referred. Here some bungler—possibly Lord Burghley himself—made an error in levels which necessitated an intermediate cornice raking right across the front of the building.

Hardwick Hall, "more glass than wall," built for the famous "Bess of Hardwick," showed the tendency of contemporary building to experiment with logical forms and improved living conditions. The old tag quoted would apply with equal truth to Gloucester Cathedral or one of our "modernist" houses, for windows have always attracted experimenters in times of change.

The large Elizabethan house usually had a central porch giving access to the "screens." This meant that the hall itself was to one side, but it was balanced by other apartments to give an apparent symmetry to the main front. The E-shaped plan was common, and it has been suggested that it was adopted in honour of Elizabeth. We need not entirely discount this legend—John Thorpe even planned a house on his own initials—but it is obvious that the E-shaped plan was convenient first and patriotic afterwards, nor did it supersede the equally common H plan, or other forms. A prominent feature of the period was the long gallery, of uncertain usage, which may have served for exercise, less frequently for collections of objets d'art, and probably more frequently as a dormitory. Another feature of the sixteenth century is the elaborate plaster ceiling, heavily patterned and with its "pendants" slightly reminiscent of the fan vault (79). The fashion extended into the following century until displaced by classical models.

Unfortunately the greatest of early sixteenth-century houses—Nonsuch Palace, near Ewell in Surrey—has completely disappeared through the rapacity of Lady Castlemaine, to whom it was given by Charles II. She promptly broke up the estate and sold the materials, though the building was in excellent condition.

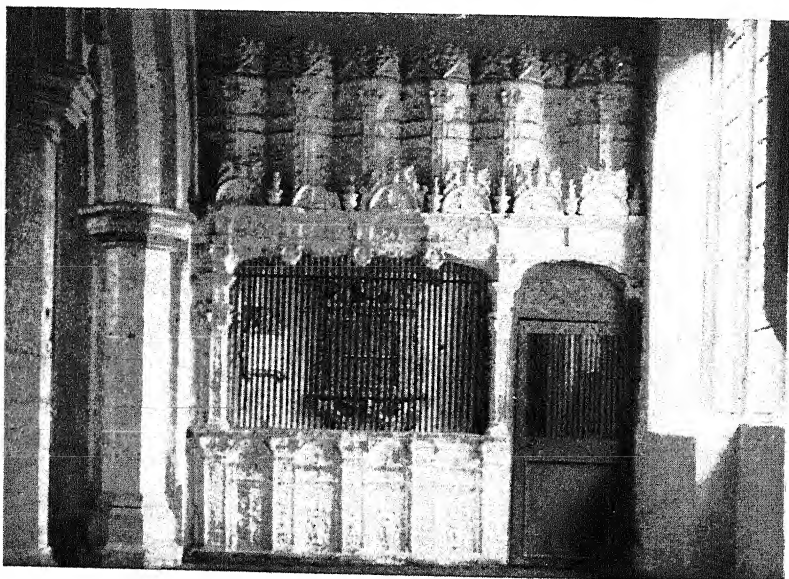
A word might be said on the subject of "secret hiding places" so beloved by the professional guide. Occasionally, for some special reason, as in the houses of those with Papist leanings, hiding places were undoubtedly constructed. Boscobel was a case in point, and



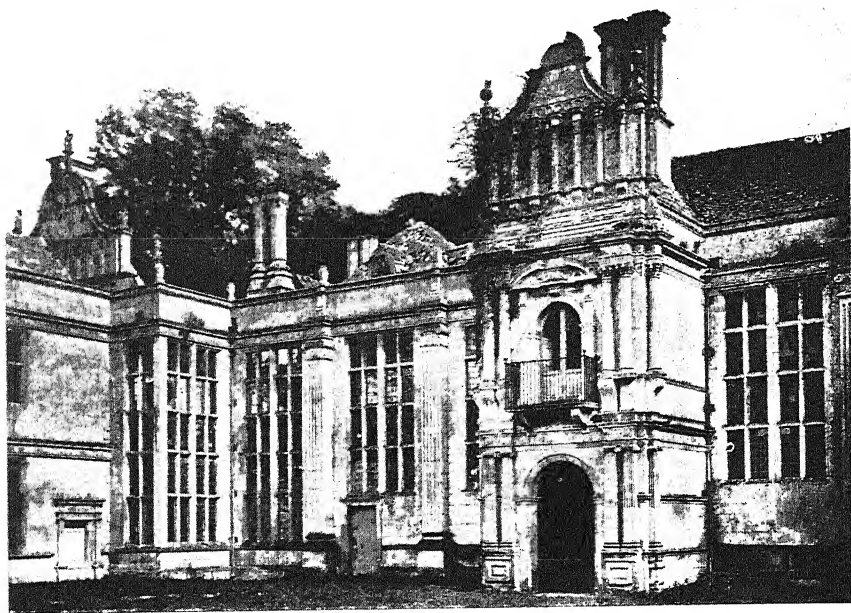
73 FORD'S HOSPITAL, COVENTRY, Warwickshire. 1530. Largely destroyed, 1940.



74 BARRINGTON COURT, Somerset. 1518-1548.



75 THE BEDINGFIELD TOMB, OXBURGH CHURCH, Norfolk. 1525.



76 KIRBY HALL, Northamptonshire. THE COURTYARD. 1572. John Thorpe, *architect*.
Window above doorway attributed to Inigo Jones.



77 MORETON OLD HALL, Cheshire. THE COURTYARD. Upper windows dated 1559. Lower by
Richard Dale, *carpenter*, 1631.



78 WROXTON ABBEY, Oxfordshire. Late Sixteenth Century.



79 GILLING CASTLE, Yorkshire. THE GREAT CHAMBER. 1585.
(Now partly removed to America.)

for this very reason was selected for Charles' concealment, though it was evidently well enough known to arouse suspicion, and the King thought it safer to move to the famous oak. Generally speaking, however, hiding was no more popular in the sixteenth century than in the twentieth, and many of the so-called "secret places" are manifestly cupboards with entrances which would not deceive a child.

Smaller houses of this century and the early part of the next are often more satisfactory, because less pretentious, than the larger ones. Moyns Park, Essex; St. John's, Warwick; Fritwell Manor, Oxfordshire; Wakehurst Place, Sussex; and, more Gothic in character, Paycockes, Coggeshall, Essex, are all delightful examples. Nor must we overlook the small informal house or cottage of brick, stone, cob or half timber which persisted into the seventeenth and even into the early eighteenth century, while in the limestone country details such as mullioned windows (83) had hardly died out before they were revived in the nineteenth century. There is no more charming sight than this "vernacular" architecture, preserved in cottage and small house in many a country town and village (66, 67, 95, 100, 101), generally of higher standard in districts which had an industrial connection in late mediæval days. The last half of this century and first half of the next have, in fact, been called the golden age of cottage building, and examples are much too numerous to instance here. They occur all through East Anglia, the Cotswolds, the South Eastern counties, and of plastered cob in the South-west. Let us not forget also the "hospital" or almshouse of unpretentious yet effective ranges.

The formal garden has already been mentioned in connection with Montacute. It owes a good deal to the Low Countries, and forms a delightful setting for these old houses. The best known examples, such as Chastleton, Oxfordshire, or Packwood, Warwickshire, with their interesting topiary work, belong to the following century, but the type was not greatly different. The mediæval garden had been little more than a pleasure with perhaps a herb garden and a mound, such as can still be seen at Boscobel.

One other development—in sanitation—may be noted. Sir John Harrington, a favourite of Queen Elizabeth, invented a water closet, and even wrote a book about it entitled *The Metamorphosis of Ajax, a Cloacinian Satire* (1596). The contrivance was installed in his own house and in the Queen's palace at Richmond, but was too much of a curiosity to make further headway. It consisted of an oval cylinder fixed underneath the closet seat, the bottom being fitted with a stopper on the end of a rod passing through the seat, and screwed for a key so that it could not be used by irresponsible people. The cylinder was filled from an overhead cistern fitted with a tap, and Sir John argued that if water were scarce flushing

once a day was sufficient. Unfortunately people were not interested in such a novelty, and it was another two centuries before the water closet began to come into use even on a limited scale.

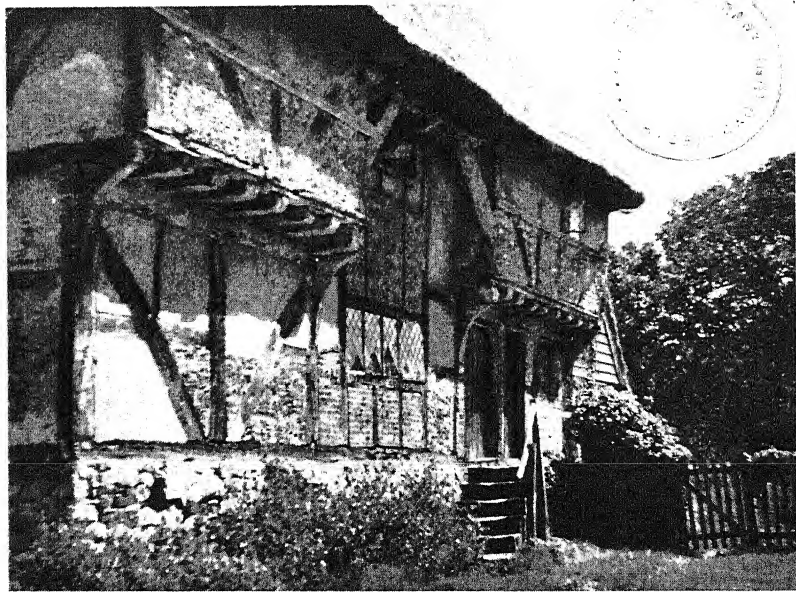
A brief comment may here be made on town and village planning, though the term is something of a misnomer in connection with mediæval England, where most settlements were like the little girl who "just grewed"—though not without some guidance in their principal lines. There is little trace of the regular planning of the Romans, except for a few faint signs already noted, and only in the exceptional case of newly established towns do we find a rough version of the ever recurrent "grid-iron" plan (e.g. Salisbury (early thirteenth-century), Kingston-on-Hull and Winchelsea (late thirteenth-century)). Settlements sprang up on transport routes, especially at fords, bridges and cross-roads, and spread more or less haphazard around a nucleus of village green, church and manor-house. The village green might become a market-place, the manor a castle and the church a cathedral. A great abbey might settle close by, but outside the individual units there was little attempt at systematic planning, beyond a tendency to huddle together for protection rather than sprawl aimlessly over the surrounding countryside. Even this might cause acute overcrowding, particularly in walled towns.

Broadly speaking the typical mediæval village consisted of a village green with adjoining church and usually manor-house, the green often being a mere broadening out of the single main village street. The typical mediæval town consisted of two main streets, crossing at right angles in the centre. Close by would be the market-place and church or cathedral, while in an adjacent quarter of the town would be the manor-house or castle. Warwick and Exeter may be mentioned as examples.

The mediæval town house had its gable end to the street, hence the system of gable tax. A series of side alleys was thus created such as may still be seen in old Stockholm, and in this country at Tewkesbury.



83. COTTAGES AT NEWTON PURCELL, Oxfordshire. Probably late Seventeenth Century.



84. YEOMAN'S HOUSE AT BIGNOR, Sussex. Mid-Sixteenth Century.



82 STONE COTTAGES AT BECK FOOT, near BINGLEY, Yorkshire. Probably late Sixteenth Century.



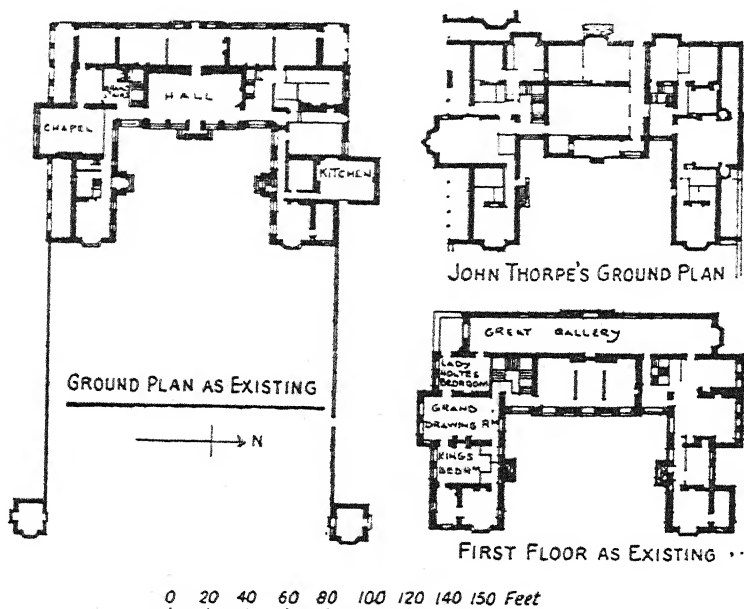
83 STONE COTTAGES AT WHITTINGTON, Gloucestershire. Early Seventeenth Century.

VIII

THE SEVENTEENTH CENTURY

THE seventeenth century is particularly interesting to us, because many of our present day problems and innovations are paralleled by those of the period. Then as now there was a struggle between old and new which was not resolved until late in the century, and, moreover, this revolution was a result of fundamental changes in ways of life and outlook which had gradually been taking shape during the previous century.

The period opened with a continuance of the hybrid styles of



Aston Hall, Birmingham.

The existing house compared with Thorpe's plan.

the previous century, though then as at present there was an attempt to stabilize design on a basis of the old tradition tricked out with the conveniences and modified details demanded by the new fashion. This style, in its most traditional manifestations labelled "King Jamie's Gothic," attempted—not without some success—the impossible task of making the best of both worlds. Its results can be seen in the more important buildings of the period, which

were mostly large private houses. Blickling Hall, Norfolk; Hatfield House, Hertfordshire; and Aston Hall, Birmingham exemplify this movement which shows considerable technical facility, though even that could not entirely disguise the hybrid quality of the style, that made it only a half-way house to the new world of the Renaissance.

Both the amateur architect and the master mason still used copy books of classical detail, which began to be published in increasing numbers, usually from French, Dutch and German sources which had not themselves completely assimilated the true classic. The result was seen in such compositions as the Tower of the Old Bodleian at Oxford, using all five "orders," or the gateway of Caius College, Cambridge, where it has even been suggested that the designer mistook the scale of the drawing.

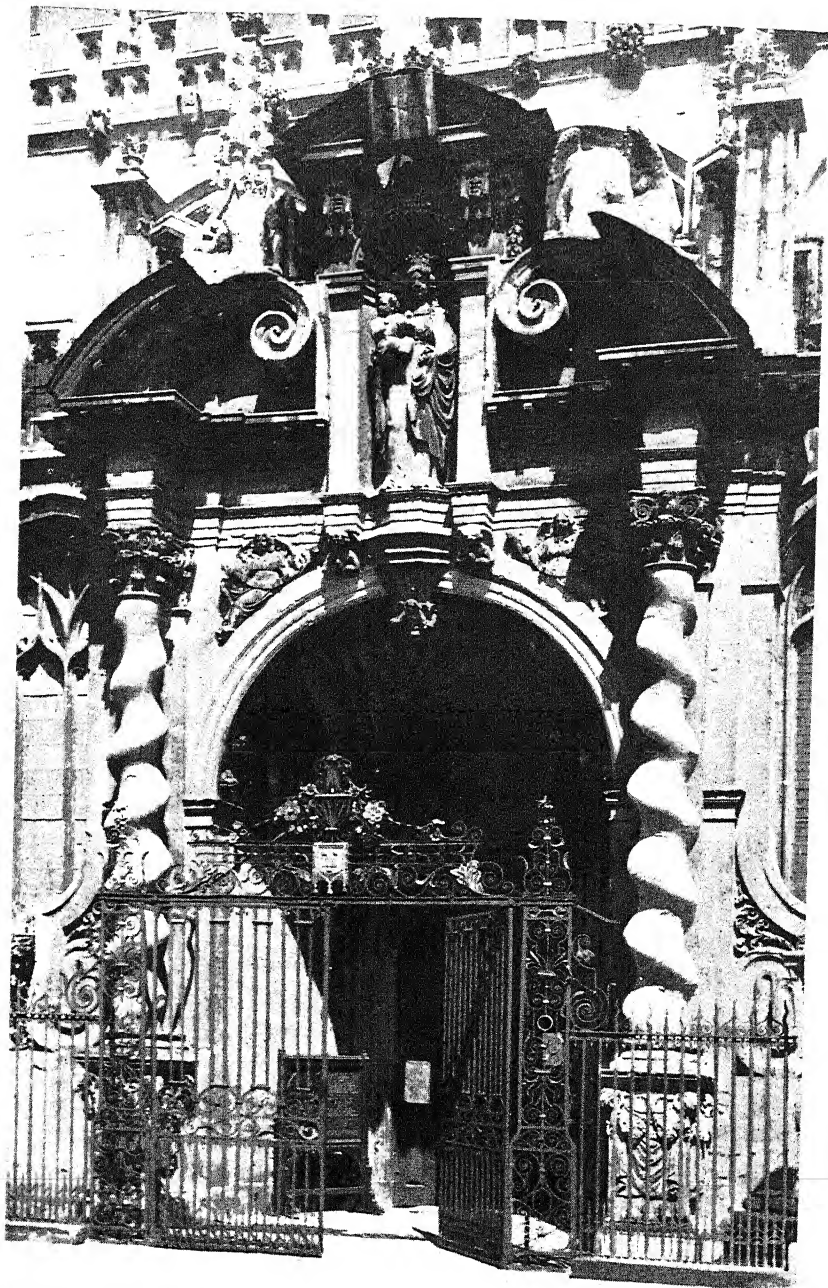
Fortunately men of greater knowledge and intelligence now began to appear, men who had travelled to Italy and had seen for themselves wherein lay the superiority of the classic manner which had created such a stir throughout Europe. In 1624 Sir Henry Wootton published his *Elements of Architecture*, which was popular enough to be republished at intervals during the next hundred years.

By this time an architect worthy of the name had already appeared in the person of Inigo Jones, of whom little is known prior to his appointment as Surveyor-General in 1615. He had, however, visited Italy, been Surveyor to Prince Henry from 1610 to 1612, and apparently held an appointment at the Danish Court. His earlier reputation was connected with the playhouse rather than with architecture, and it was he who was largely responsible for the development of the theatre into the form it preserved throughout the eighteenth and nineteenth centuries. In this connection we have evidence of his activities as early as 1605, though evidently before his reputation had been made. The University of Oxford entertained King James at Christ Church in this year and "hired one Mr. Jones, a great Traveller, who undertook to further them much, and furnish them with rare Devices, but performed very little of that which was expected."

Jones' early years are associated traditionally with a number of near-classic buildings, such as the ingenious little windmill at Chesterton, Warwickshire and the nearby house of the Petos (since destroyed), but there is no exact evidence of his authorship. His first authentic building, and also his finest, was the Banqueting Hall in Whitehall, intended to form part of an ambitious royal palace (84). Begun in 1619 at an estimated cost of £9,850, it was completed in three years at an actual cost of £15,653. It is not recorded how Jones explained the difference, but it is to be hoped that the King realized that he had obtained not only the first, but one of the finest, masterpieces of the English Renaissance.



84 THE BANQUETING HALL, WHITEHALL, London. 1619-1622. Inigo Jones, *architect*.

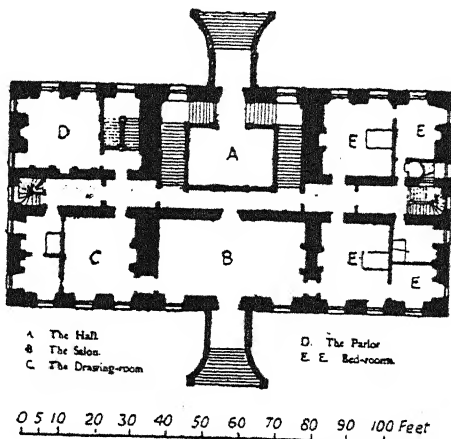


85 THE SOUTH PORCH, ST. MARY'S CHURCH, Oxford. 1637. (The carved figure is by Nicholas Stone.)

Charles I, one of the few monarchs who patronized the arts intelligently, shared the unfortunate unpopularity which has always dogged such an un-English trait, and it was from a window of his Banqueting Hall that he stepped on to the scaffold in 1649. His patronage of Jones and of Van Dyck had brought him no better fortune than that of Richard II, another royal dilettante.

In some ways this sudden appearance of mature classic was even more astonishing than the adventurous experiments of the Gloucester masons three centuries before. True, the new style was in this case an importation, and Jones had become familiar with it in Italy, but even so it must have required considerable courage on the part of both architect and client to make such a break with established precedent. A lesser man would have made concessions to popular opinion, to produce yet another hybrid, but Jones launched out boldly and produced a building masterly, refined, elegant, and surprisingly free from any experimental clumsiness. Here was no concession to the pedestrian designs of tradition, but a scholarly interpretation of the principles of Palladio. It is small wonder that the influence of Inigo Jones was enormous despite the paucity of his recorded works. Only one other building can be attributed to him with complete certainty, and that is the Queen's House at Greenwich (87). Beyond that his reputation is not only inextricably mixed with that of his nephew and pupil John Webb, but records are extremely incomplete.

He certainly designed a classical portico for old St. Paul's, which Wren demolished after the fire with the greatest reluctance. He is also associated with at least the lay-out of Lincoln's Inn Fields, and with St. Paul's, Covent Garden. The south front of Castle Ashby, Northamptonshire, and the north front of Kirby Hall, in the same county, are commonly attributed to him, also with more authority a good deal of work at Wilton, Wiltshire, with its splendid interiors. Very slender is his connection with Coleshill House, Berkshire, which is linked with Sir Roger Pratt as designer (91). Recent research has awarded most of the credit for this fine house to Pratt, who consulted Jones in its early

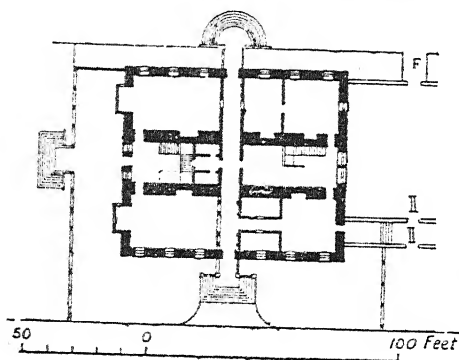


Coleshill House, Berkshire.

stages. The extant drawings of Whitehall Palace are now attributed to John Webb, as are Ashburnham House, Westminster; Ashdown House, Berkshire; Thorpe Hall, near Peterborough; and many other works.

Jones also produced many fine sketches for the setting of Court masques, which had a strong influence on contemporary design.

On the outbreak of the Civil War Jones is said to have buried his money in Lambeth marshes with the help of Nicholas Stone, his mason and



Thorpe Hall, Peterborough. John Webb, *Architect*.

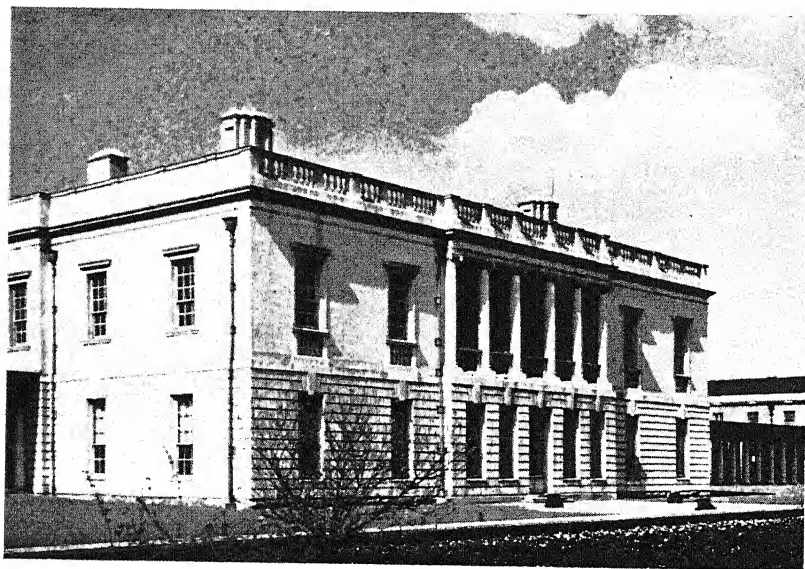
sculptor. He fell into the hands of the Commonwealth in 1645 and was heavily fined, ultimately dying in poverty in 1652. Stone and his son, who studied in Rome under the great Bernini, became famous for their monuments, of which they executed a great many, in places as divergent as Westminster Abbey and the little parish church of Stoneleigh, Warwickshire. Jones and his followers thus established a classical tradition which was to sweep the country, and there could be no more thought of going back to King Jamie's Gothic. Yet the old style died hard, and lesser designers still clung to the old ways until well into the following century. Such houses as Chastleton, Oxfordshire, did not differ greatly from their fifteenth-century prototypes, while simple buildings such as the market halls at Chipping Campden, Gloucestershire, and Dunster, Somerset, show little sign of the new style. Nor did such buildings as the slate-hung house near the church at Dunster, or the timber market buildings of John Abel in Herefordshire, *e.g.* Ledbury and Leominster. Lymore Hall, Montgomery (1675), now pulled down, was an even later example of half timber work, though some of the materials may have come from Montgomery Castle. As late as 1640 the staircase hall at Christ Church, Oxford, was built with a pure Gothic fan vault.

It is interesting to note the evergreen complaint of shoddy workmanship occurring early in the century. "In all buildings this one thing is observed, spare of stuff, scarcity of timber (which is too general) and that workman that can doe his work with most beauty, least charge, albeit nott so strong, he is most required" (Robert Reyce, 1618).

A feature of late sixteenth and early seventeenth-century houses is the grand staircase, normally of oak and heavily carved, as at



86 GREENWICH HOSPITAL from the Thames. The work of Webb, Wren, Hawksmoor, etc. Mostly late Seventeenth Century.



87 THE QUEEN'S HOUSE, Greenwich. 1618-1635. Inigo Jones, *architect*.



88 ST. PAUL'S CATHEDRAL, London, from the west, 1675-1710. With ST. MARTIN, LUDGATE.
1654. Sir Christopher Wren, *architect*.

Hatfield and Blickling. At first the steps were solid, as at Kirby Hall, but they were later cased with a separate tread and riser of more economical scantlings. The use of such staircases corresponds to that of the long gallery, to which it gives suitable access, in contrast to the mediæval stair which was almost invariably of the spiral type. This change is typical of the revolution in domestic life which was taking place. The old quadrangular house with external access to its different parts was gradually changing to the compact block of Renaissance times. In the previous century Lord Bacon had recommended a "double house" with rooms front and back of the same wing. At Aston Hall the great hall is reduced to little more than an entrance hall, and in Coleshill and Ashdown House the change is complete. In style also the new fashion not only swept away the free picturesqueness of Gothic in favour of a disciplined symmetry, but represented the increasing taste for private scholarship as opposed to the communal faith of the Middle Ages.

The civil war naturally interrupted building activity, but helped to confirm the new style both by the break necessitated with the past, and the enforced exile of the king and his court in continental surroundings. "The Low Countries generally have three cities at least for one of ours, and these far more populous and rich" (Robert Burton, 1621).

At the Restoration several of Jones' contemporaries were still active. John Webb, Hugh May and Roger Pratt may be mentioned. Pratt carried out several works, chief among which was Clarendon House. Pepys was "mightily pleased with the nobleness of this house, and the brave furniture and pictures" (9.5.1667), while two years earlier Evelyn had written "Nothing abroad pleases me better, nothing at home approaches it." Unfortunately the unpopularity of its owner, Lord Chancellor Hyde, caused its sale and demolition in 1683, after his flight. May, who became Comptroller of the Works, was the designer of old Bethlehem House, and of Eltham Lodge, Kent, long a golf club house, with its pleasant interiors and scroll-carved staircase.

Sir Balthazar Gerbier published two books in the early sixties, and his pupil, the accomplished Captain Wynne, did a good deal of work, most of which has unfortunately disappeared (Hampstead Marshall, Berkshire; Coombe Abbey, Warwickshire (92); Old Buckingham House, London).

Webb was also unfortunate. He had hoped to get the Surveyorship, which indeed he well deserved, but was discarded in favour of a talented young amateur, Mr. Christopher Wren (he was not knighted until 1673). In view of the results we can hardly regret Webb's ill luck, though at the time Mr. Wren owed his success to influence and ability in other fields. He had already achieved

European fame as an astronomer and mathematician. As early as 1654 Evelyn records visiting at Oxford "that miracle of a youth, Mr. Christopher Wren, nephew of the Bishop of Ely." For some years he had dabbled in architecture, and in 1662 had designed the Sheldonian Theatre, a building more remarkable for its constructional and acoustical properties than for its architectural attraction.

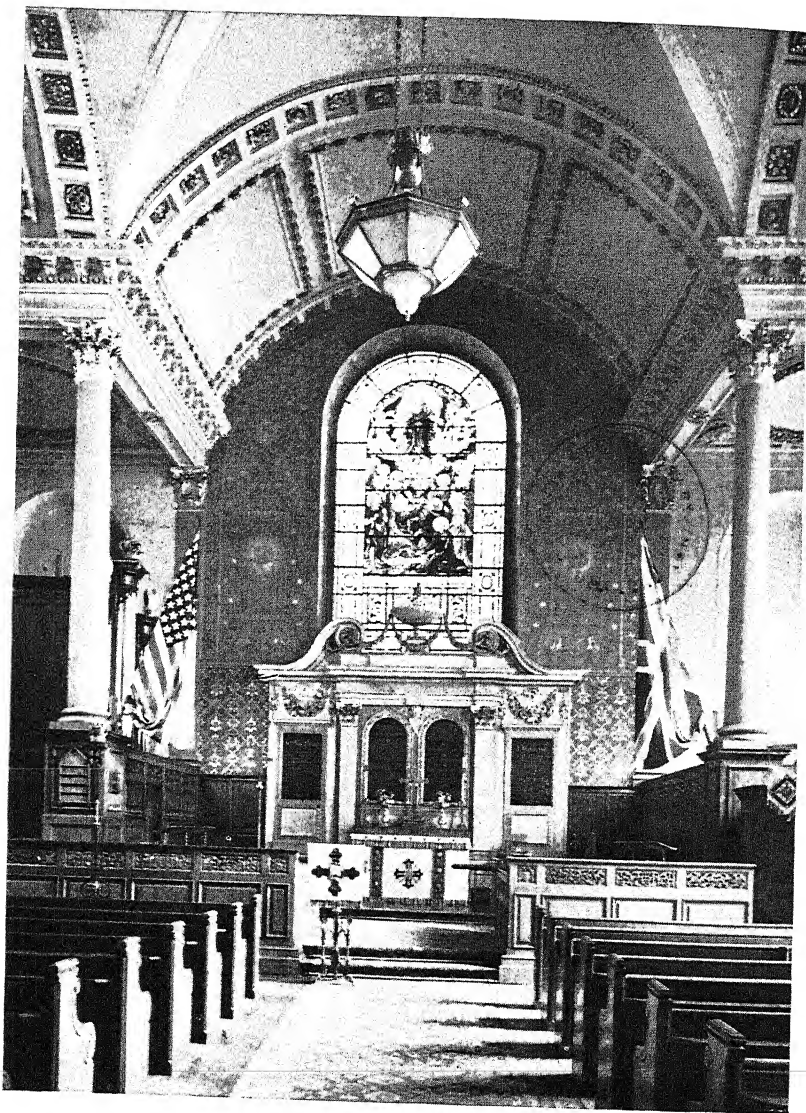
It was in 1666 that he was appointed Surveyor-General, and principal Architect for rebuilding the City of London after the Great Fire, and in 1667 he became Surveyor-General of the Royal Works at the age of thirty-five. Both Evelyn and he had hurriedly produced plans for the rebuilding of the City after the Fire, and had presented them to the King within a few days of that calamity. Unfortunately the anxiety of private owners to retain their original sites brought these schemes to nothing, and a great opportunity was lost. There was no background of Town Planning to make such schemes possible and the idea was too novel to meet with anything but suspicion, though the plan produced by Wren has always been accepted as a model of its kind.

For the next thirty-eight years Wren was kept busy with the rebuilding of the City churches, of which fifty-three are attributed to him, and with St. Paul's Cathedral (1, 88, 89). Even before the Fire he had prepared designs for remodelling the cathedral on the lines initiated by Jones. After the Fire the Commissioners, against his advice, started to patch up the building, but an early failure brought Wren back on the scene.

He now set to work to clear away the ruins and to prepare schemes for a new building. His first design, of which a model exists, was in the form of a Greek cross with short arms and a large domed central space. This was too advanced in plan to meet with approval, and he next prepared a more traditional scheme, largely on the lines of the existing building. This design received the royal warrant in 1675, and was distinguished architecturally by a central dome capped by a pagoda-like spire of the most extraordinary vulgarity. Fortunately Wren took advantage of his authority to make variations, "rather ornamental than essential," and to redesign entirely this curious caricature, which was replaced by the present magnificent dome. He got over the difficulty of satisfying both interior and exterior appearances by using a double dome separated by a structural brick cone which carries the lantern. The external dome is thus high enough to dominate the building without giving too well-like an effect inside. It was not until 1697 that the first service was held in the new church, and the last stone on the lantern is believed to have been laid in 1710, by which time his relationship with the Commissioners had become extremely embittered, his money had been withheld, and his advice often overruled.



89 ST. PAUL'S CATHEDRAL, London. THE DOME AND CHOIR. 1675-1710, Sir Christopher Wren, architect.



90 ST. ANNE AND ST. AGNES, GRESHAM STREET, London. Sir Christopher Wren, *architect*.
Late Seventeenth Century.

It would obviously not be fair to judge St. Paul's from the same standpoint as the mediæval cathedrals, though it is such a criterion which has caused critics to condemn the screen walls which Wren designed over his aisles to hide the ugly buttresses behind. This and other features may be lapses from structural integrity from the Gothic point of view, but the Renaissance was never very interested in structure except as a means to an end, and where classical composition demanded a structural compromise, it was rightly conceded. There are times when either structural integrity or composition must succeed at the expense of the other, and if the mediæval designer took one road and the classical designer another, we should do well to realize that either way is legitimate. To suggest that structure has the greater moral claim is to adopt a purely materialistic view. Certainly, apart from such minor criticisms, St. Paul's exhibits a handling of mass and detail, light and shade, which puts it in the front rank of English building. It is in the grand manner, sometimes called Baroque, largely conceived, yet neither overpowering in scale nor ostentatious in detail. In short it has those lively qualities of good sense and good manners which Wren managed to impart to nearly all his buildings.

By contrast, his City churches are often less successful, yet they show an extraordinary fertility of invention and mastery of design. The planning of these churches was no mean achievement, for, quite apart from their number, the sites were often cramped and awkwardly shaped. Moreover, the solution sought had little precedent, for Wren broke away from mediæval tradition, and always kept in mind the need to plan his space primarily as an auditorium. Here again he lost a good deal of the mystery of Gothic, but gained more practical advantages in meeting the actual needs of his age, at a reasonable cost and with a pleasant directness of manner. In some few churches, such as St. Lawrence Jewry, now destroyed (111), funds permitted considerable enrichment in the internal details, but more often elaboration was reserved for the upper stages of the steeple, where it was used with excellent effect. Examples of ingenious planning are, or were, St. Stephen Walbrook, and St. Benet Fink, while more straightforward solutions, which set a standard for the next century, were St. Clement Danes, and St. James, Piccadilly.

Wren was fortunate in his choice of craftsmen. Grinling Gibbons, who worked on St. Paul's, became a household name. Jean Tijou, the smith, employed at St. Paul's and Hampton Court, set a standard for English ironwork for many years, and Wren's masons were almost equally accomplished. The Stronges, father and son, worked on St. Paul's, while Robert Grumbold, who was employed by him at Trinity College, Cambridge, was himself the designer of much of Clare College. Sir James Thornhill the painter, who worked for

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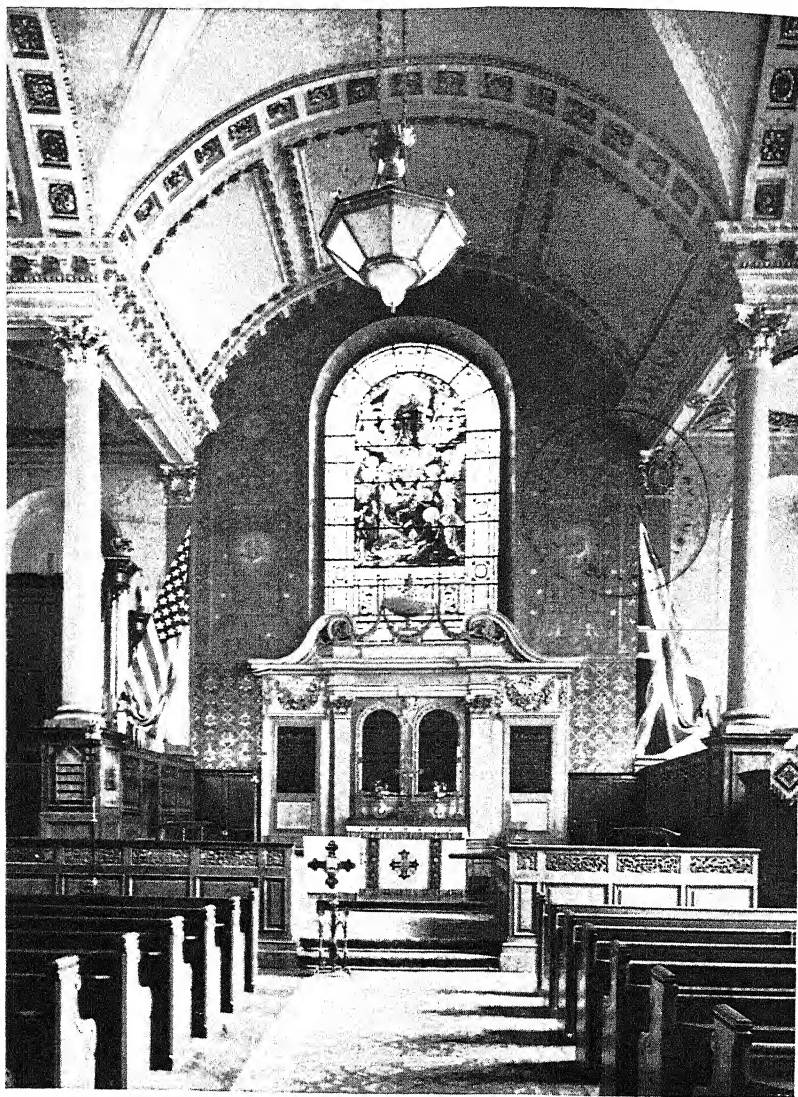
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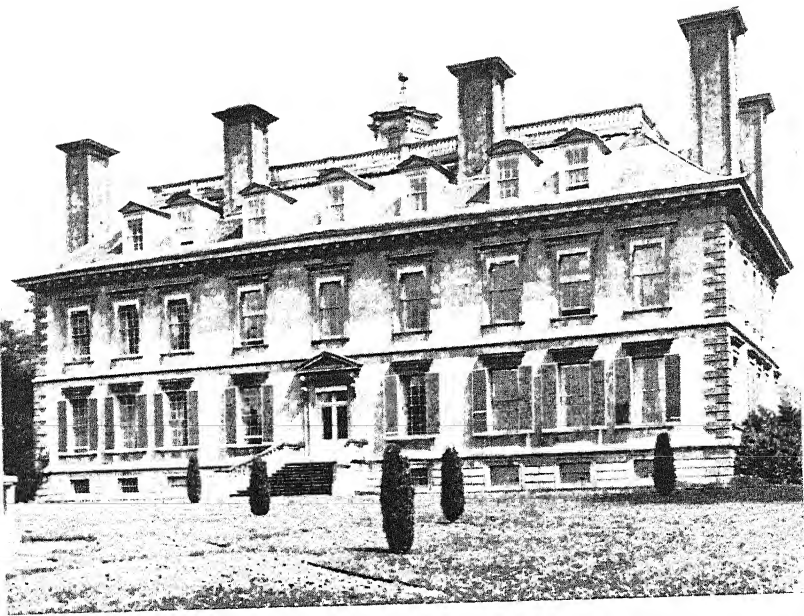
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Wren at St. Paul's, Greenwich Hospital and elsewhere, was outstanding as a painter, though fame often remembers him best as the father-in-law of Hogarth. Nevertheless his frescoes are often of great splendour; they may be seen on the dome of St. Paul's, at Greenwich Hospital (the famous Painted Hall) and in some country houses such as Hanbury Hall, Worcestershire. Stoke Edith, Hereford, finest of all, was burnt some years back.

Of other buildings designed by Wren, the best known are Hampton Court Palace, Chelsea (104) and Greenwich (86) Hospitals, and some ranges in the Temple. The first two strongly influenced other designers, as is apparent from the style of English vernacular building throughout the eighteenth century. At Hampton Court he made a clean break with the design of Wolsey's building, and would have swept much more of it away had his plan been adopted in its entirety. The garden front is one of his most successful elevations, despite its dummy circular windows, and successfully achieves dignity while maintaining the charm of an almost domestic scale. Inside the building Wren endeavoured to speed up the work by using timber framing, in a manner already tried at Whitehall, but, owing possibly to lack of supervision, a disastrous collapse occurred, which seriously injured his reputation. He seems to have been somewhat easygoing in his dealings with contractors, and towards the end of his career was accused of winking at very doubtful practices on their part. His own honesty, however, has never been questioned, though the times were not noted for any nice scruples of conduct. Of Chelsea Hospital, even Thomas Carlyle remarked that it was evidently the work of a gentleman. Interpreted in its best sense, no higher praise or more perspicacious criticism could have been bestowed.

At Greenwich, Wren was faced with the problem of incorporating the Queen's House, designed by Inigo Jones (87), and the unrelated and unfinished palace of Charles II, begun by Webb (possibly from Jones' designs). His solution was to reproduce the design of the latter about an axis passing through the Queen's House. Behind the two blocks (King Charles' and Queen Anne's) thus formed, were placed two larger quadrangular blocks (King William's and Queen Mary's) with domed pavilions at the inner corners (86), so that the whole made up a great dual composition framing a vista of the original Queen's House. The latter is perhaps an inadequate climax to the vista, but Wren has overcome this by his emphasis on the twin domes, which together become the real focal point of the composition, set off by the green forecourt leading down to the river. Several architects worked on the buildings at Greenwich, but the main conception is Wren's and he executed the two domes.

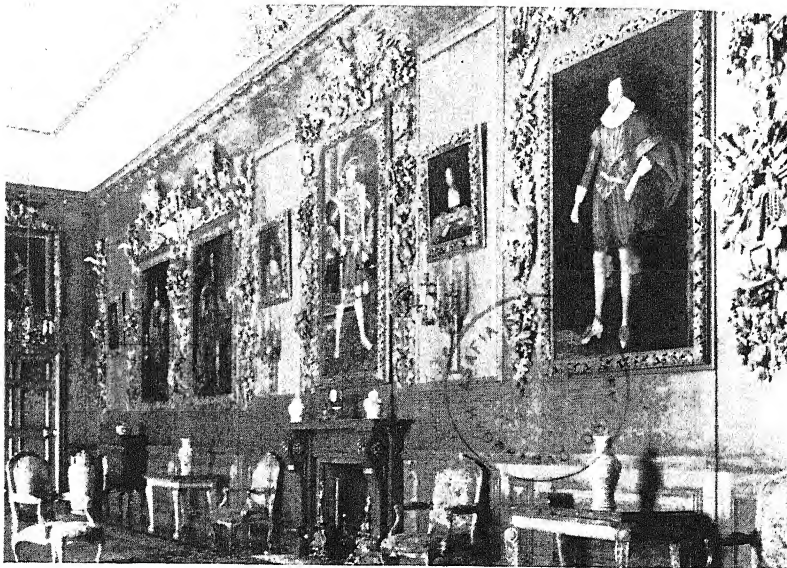
Wren's scanty "Gothic" work, such as the steeples of St. Michael, Cornhill, and St. Dunstan in the East, is not so happy.



92 COLESHILL HOUSE, Berkshire. 1650-1664. Sir Roger Pratt *architect*, with Inigo Jones.



92 COOMBE ABBEY, Warwickshire. 1684. Captain Wynne, *architect*.



93 THE CARVED ROOM, PETWORTH HOUSE, Sussex. Late Seventeenth Century. (Carving by Giralting Gibbons.)



94 THE STAIRCASE, DUNSTER CASTLE, Somerset. 1681.

Like his successors, he used "Gothic" as a decoration on classical forms, much as the builders of the previous century used classical decoration on essentially Gothic designs (this was the conception of "Gothic" prevalent throughout the English Renaissance). It is thus of no vital importance, but is interesting as a dilettante excursion into the realms of romanticism, and at least has the merit of avoiding the false antique.

During Wren's lifetime classical design became firmly established, and was adopted almost everywhere, not only by architects but also by working masons and carpenters, whose skill became well known even on the Continent. Such mongrel works as the Beaufort Dower House, Monmouth (1675) were becoming unusual, though, as we shall see, the Elizabethan tradition did linger in parts well into the next century.

Development was encouraged by the great expansion of the towns which took place during the late seventeenth and early eighteenth centuries. Better roads, a growing merchant class, and above all increased security meant rapidly spreading suburbs. The old towns were being both extended and rebuilt, or at least re-faced. The capricious designs of the previous century no longer found favour, and where rebuilding proved too expensive, old premises were often hidden behind a new classical façade, thus removing many of the worst vulgarities of the immature Renaissance. This transformation of style was helped by a series of disastrous fires which destroyed many an old and insanitary town, and emphasized the need for less inflammable structures. The great fires of London (1666), Warwick (1694) and Blandford in Dorset (1677, 1713 and 1731) may be instanced, while the speculator was also in evidence, chief among his ranks being Dr. Nicholas Barbon, son of the Parliamentary Praise God Barebones. Mediæval towns, except where a Roman settlement had given some regularity, showed little signs of town planning. The church, manor-house, and village green or market-place left their impress, but only now did any attempt at regular planning occur, and even that was sporadic and largely confined to London, Bath and other important centres. The ancient tradition of planning which has left its mark in Holland, Sweden and Germany has, in fact, hardly touched our own towns until very modern times.

There is little space to mention other Restoration designers, of whom too little is known. William Talman, who proved a bitter enemy of Wren, designed a number of correct, and sometimes impressive, buildings, of which the most important was Chatsworth, Derbyshire (1687-1700). In the provinces, Henry Bell designed the Custom House (1681) (97) and Duke's Head Inn (c. 1685) at King's Lynn, and there were evidently a number of other able local designers living at the end of the century. Wren's assistant,

Nicholas Hawksmoor, designed the western towers of Westminster Abbey and Easton Neston House, Northamptonshire, and worked at Greenwich as well as under Vanbrugh (see later). His London churches are original and varied; if St. Mary Woolnoth is not particularly attractive, St. George's, Bloomsbury, is a well-balanced design and Christ Church, Spitalfields, of outstanding vigour.

Little church building was done outside London, but earlier there are such Jacobean or hybrid works as St. John's, Leeds (1632-3), Croscombe, Somerset (interior fittings) (1616), Warwick nave (completed 1704), and the church at Compton Wynyates, Warwickshire (1663), smashed in the siege; while under Archbishop Laud many churches were repaired and furnished, and communion rails erected to keep dogs from the sanctuary. To this period belongs the charming porch of St. Mary's, Oxford, with its twisted columns, popularly associated with Inigo Jones (85). In the county of Durham, under Bishop Cosin's auspices, much Carolean wood-work was added to a number of churches in a curious but not unattractive mixture of Gothic and Renaissance forms; instances are the towering font cover of Durham Cathedral, the stalls at Brancepeth and the screen at Sedgefield. The mid century did much to destroy what remained of mediæval art after the depredations of Henry VIII. Iconoclasts, such as the notorious Colonel Purefoy and the detestable Dowsing, systematically destroyed statuary and glass in an excess of Puritan zeal which we can only bitterly regret.

THE EIGHTEENTH CENTURY

THE eighteenth century saw a flowering of the arts as splendid as that of the Middle Ages, though of a very different nature. As we have already noticed, the power of the Church had been supplanted by that of the great landowner, who, however, inherited the same love of building display, with an even more amiable weakness for extravagance, which resulted in many a gentleman ruining his estate and fortune by over-ambitious schemes. We may instance Lord Stawell of Somerton, who inherited twenty-eight manors at the end of the seventeenth century, and died impoverished before he had half completed what was to have been the finest house in the county. From the place-seeking courtiers of Charles II to the young bucks of the Regency, all considered it necessary to support their position by the ownership of a fine house, preferably in the latest taste. Indeed the term eighteenth-century art is too often used to cover the whole of this phase, though by the beginning of the century many of the finest buildings of the developed Renaissance were built or in building, and there was an extension into the following century, more characteristic of this style than of the age of Victoria.

In contrast to the aristocracy, the condition of the poor steadily deteriorated until the early eighteen hundreds, when it reached its lowest ebb. If the gulf between the two classes was not quite so disgraceful as that which caused the French Revolution, that is the best that can be said of it. Between the two came a rising merchant class, but the industrial revolution at first made the position of the working man even harder than before, so that the occurrence of machine-breaking riots was hardly surprising. It was mainly among the poor that "Enthusiasm," as the Evangelical Revival was then called, found its adherents, for the parish parson was usually too closely allied with the gentry to have any but "polite" views on his office. Was it not an eighteenth-century Duchess of Luxembourg who exclaimed "What a pity the good God had such dreadful taste"?

Politically the century was marked by almost constant wars abroad, balanced by an uneasy peace at home, which was broken by the Jacobite risings of the "'15" and "'45" and the threat of Napoleonic invasion. Architecture was mainly an affair of town and country houses, with the addition of many a pleasant church, town hall, assembly room, or college. Its discussion tends easily to become a catalogue of names, for its development is chiefly

portrayed in the work of the leading architects of the day. Yet, for every architect mentioned there were hundreds whose names have disappeared, as may be readily understood by a study of the innumerable sound buildings which still remain to represent the period. The early century was still a period of good cottage building, and by this time enclosures and hedgerows were already leading to a form of English landscape recognisably similar to that of the present day.

Although Wren's later work has been dealt with in the last chapter, a good deal of it was carried out in the early years of the eighteenth century. Dutch influence was marked at this period, as might be expected with a Dutchman—William III—on the throne, and it paralleled the tendencies of Wren's more domestic manner. The result was a fine school of classical design in brickwork, which lasted throughout the century. Examples of this style at its best may be seen in Chelsea Hospital (104) and Hampton Court Palace, while in its domestic form there are innumerable houses, popularly but apparently erroneously connected with Wren, such as Wrencote, Croydon; a house in West Street, Chichester; and Groombridge Place, Kent. Even the Old Court House at Hampton Court, where Wren lived, dates from before his time, though he must have remodelled it fairly thoroughly. All these buildings have mellow brickwork, white-painted sash-windows with rubbed brick "arches," and classical details. They are of a type which persisted until the romantic revival, and still lends distinction to many a village or country town and to not a few cities. Apart from technical improvements in cooking and sanitation, no more "liveable" houses have ever been designed.

In lesser buildings such as these, however, the old "near classic" tradition often lingered for some years. Mullioned windows occur not only (*e.g.*) at Tyttenhanger House, Hertfordshire, and in the charming "College of Matrons" at Salisbury (1682), but in much later buildings, such as the Latin School, Warminster (1707), Tintinhull Manor, Somerset (1720), and Medford House, Mickleton, in the Cotswolds (98). Even more primitive is the market hall at Tetbury (1700), a town with many good buildings in the "vernacular" style of the eighteenth century and earlier. At Stamford, Lincolnshire, on the other hand, the full classic manner appears in such houses as 3 All Saints Place as early as 1683. Another fine design is that of Mompesson House, Salisbury (1701). The style of the whole of the first quarter of the century is commonly labelled "Queen Anne," though she reigned only from 1702 to 1714.

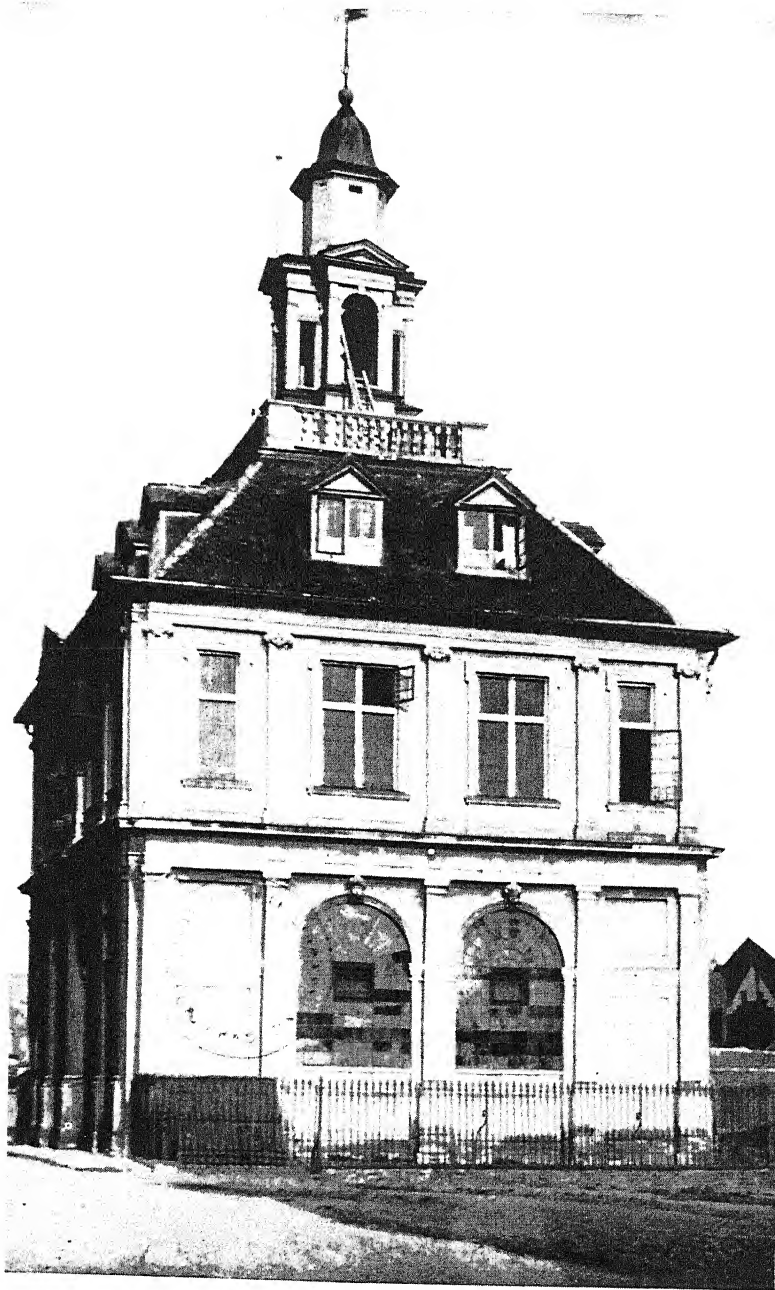
A great deal of building was going on at this time, particularly around London. "All those villages which may be called the neighbourhood of the City of London . . . are increased in building to a strange degree within the compass of twenty or thirty years past at most. . . . This is most visible at Stratford in Essex, but



95 TILEHUNG COTTAGES AT WITLEY, Surrey. Seventeenth Century.



96 HALF-TIMBER COTTAGES AT STONELEIGH, Warwickshire. Early Seventeenth Century.



97 THE CUSTOM HOUSE, KING'S LYNN, Norfolk. 1681. Henry Bell, *architect*.

it is the same thing in proportion in other villages adjoining. . . . In which place . . . above a thousand new foundations have been created, besides old houses repaired, all since the Revolution" (Daniel Defoe—*A Tour through Great Britain*, 1722). The Revolution was of course that of 1688, which brought William of Orange to the throne.

As already mentioned, the design of smaller buildings owed much to the Wren tradition, but—by contrast—there was a growing antagonism to Sir Christopher among the more fashionable younger architects. They returned to the ideals of Inigo Jones, though they seldom equalled his genius. If Jones was the unconscious prophet of this movement, its God was Andrea Palladio of Vicenza (1518–80), whose book *I Quattro Libri dell' Architettura* was its Bible. It says something for the vitality of this work, first published in 1570, that it should be followed with religious enthusiasm one hundred and fifty years later. Palladio had been compelled to design his buildings in the poorest of materials (mainly stucco), but his English followers endeavoured a lavish reincarnation, in fine masonry, of designs for large houses sometimes better suited to the climate of Italy. Not that this great house building was a new development, for it had been going on at least since the dissolution of the monasteries, and in the previous century many private palaces had been built, though distinguished more by size than style. Now, however, even the masons were familiar enough with the "Orders" to work out details with a minimum of assistance, and architects strove to achieve the grand manner of the Italians, though not always without falling into the pit of pomposity.

The virtues and vices of this school are nowhere more clearly shown than in the work of Sir John Vanbrugh, poet, dramatist, soldier and scene designer, who first acquired fame through imprisonment in the Bastille. Not until he was thirty-six did Vanbrugh take up architecture, and his success was phenomenal. Castle Howard, Yorkshire (1702–14), was followed by Blenheim, Oxfordshire (1705–27), his largest masterpiece (108). Built for the Duke of Marlborough by a grateful nation, which proved most reluctant to pay for it, Blenheim was a constant source of worry and humiliation to its architect, who found himself compelled to advance wages out of his own pocket in order to keep the work going. Moreover, he fell out with the Duchess, a masterful woman with a genius for management, which Vanbrugh does not appear to have shared. On one occasion she even had him turned out of the park. When the State allowed the widowed Duchess £22,000 a year, Vanbrugh complained that this meant "£12,000 to spoil Blenheim and £10,000 to keep herself clean and go to law."

Blenheim, with its four acres of lead roof, is—despite its faults—something more than a large Baroque house. The critics com-

plained that it was pompous, that it contained no room of a size worthy of the house, and that the kitchens were a hundred yards from the dining-room; yet as a design it was intensely dramatic and effective. Not for nothing had its architect studied the art of scenic design. "In the buildings of Vanbrugh, who was a poet as well as an architect, there is a greater display of imagination than we shall find perhaps in any other" (Sir Joshua Reynolds). This was the verdict of a great artist, but popular criticism was better represented by Pope:—

"Thanks Sir I cried, 'tis very fine,
But where d'ye sleep, or where d'ye dine.
I find by all you have been telling
That 'tis a house, but not a dwelling."

The Rev. Abel Evans suggested as Vanbrugh's epitaph—

"Lie heavy on him earth, for he
Laid many a heavy load on thee."

On the whole, it was a healthy Puritanism which reacted from such display, and which preserved the decent propriety of general building. Yet we can be grateful for the extravagance which produced a Vanbrugh to enliven the scene. His generous exuberance of display contrasts agreeably with the sound commonsense of the lesser designers of the period, and his work should be "read" in that context.

He himself wrote "One may find a great deal of Pleasure in building a Palace for another; when one should find very little in living in't ones Self." His own taste was evidently for the romantic, as may be seen by the still surviving "Castle" which he built for himself at the top of Maze Hill, Blackheath.

Vanbrugh also worked at Greenwich and designed King's Weston House, near Bristol; possibly Oulton Hall, Cheshire; Seaton Delaval, Northumberland; and additions to Grimsthorpe, Lincolnshire. Of these, Seaton Delaval, now a deserted shell on the edge of a mining district, preserves the vigour, originality and heroic scale of his earlier work (109). It seems worthy of the brief and curious career of its owners—the Delavals—the last of whom was killed by a dairy maid, who answered his unwelcome attentions with a too well-planted kick.

At Castle Howard and Blenheim, Vanbrugh had the assistance of Wren's pupil, Nicholas Hawksmoor, whose practical knowledge must have been invaluable. Hawksmoor's own work is by no means lacking in character and vigour, though unbiased critics suggest that it tends to become an unsatisfactory pastiche of Vanbrugh and Wren. He was at his best in his more subdued designs, such as the old Clarendon Building, Oxford, and St. Alphege's,



95 MEDFORD HOUSE, MICKLETON, Gloucestershire. 1999.



99 CROWN HOUSE, NEWPORT, Essex. Dated 1692.



100 HALF-TIMBER COTTAGES AT CROPTHORNE, Worcestershire. Probably Seventeenth Century.



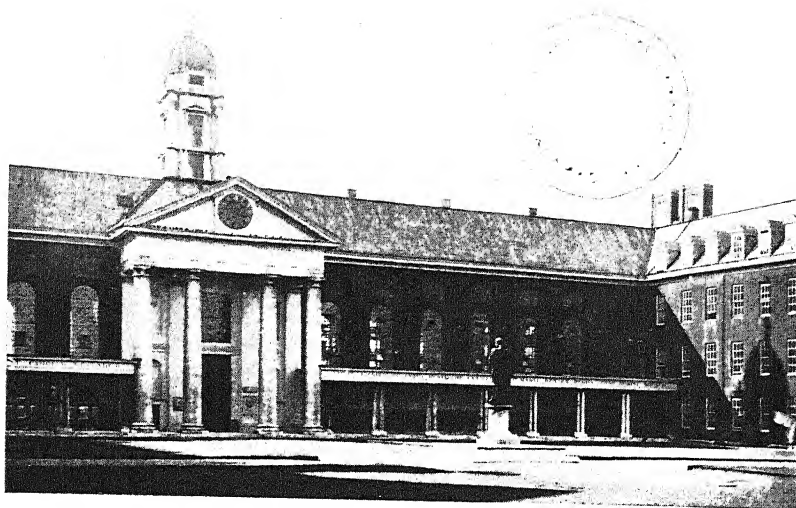
101 BRICK AND WEATHERBOARDED HOUSES AT GROOMBRIDGE, Kent. Probably early Eighteenth Century.



102 ROBIN HOOD'S BAY, Yorkshire. A fishing village dating largely from the Seventeenth and Eighteenth Centuries.



103 HOPE COVE, Devon. COB AND THATCH COTTAGES. Probably Seventeenth Century.



104 CHELSEA HOSPITAL, London. 1682-1692. Sir Christopher Wren, *architect*.



105 QUEEN ANNE'S GATE, WESTMINSTER London. 1704.

Greenwich, now badly and damaged, with a steeple by James. Queen's College, Oxford, is also admirable, though in this case Hawksmoor's authorship is not established beyond doubt. His less certain vagaries of taste are apparent in St. George's-in-the-East, and in his curious "Gothick" quadrangle at All Souls, Oxford (106).

Also associated with Vanbrugh, in the north, was a certain William Wakefield, of whom little is known. Sir John's pupil, Thomas Archer, did some sound though hardly outstanding work, of which St. Philip's Cathedral, Birmingham, is the best known. A more important architect of the period was James Gibbs, designer of St. Mary-le-Strand and St. Martin's-in-the-Fields, London (4); the Senate House, and part of King's College, Cambridge; and the Radcliffe Library at Oxford, the designs for which he published in book form in 1747. He also built Ditchley House, Oxfordshire, and Milton House, near Peterborough; and published two books—*The Book of Architecture* (1728) and *Rules for drawing the several parts of Architecture* (1733) (v. p. 8). Gibbs' buildings were elegant and scholarly, and he may well claim to be the most accomplished architect of the second quarter of the century.

Among his contemporaries were Campbell, Kent, Leoni and Ripley, of whom the first three were protégés of that celebrated dilettante, the Earl of Burlington. It is very doubtful whether Lord Burlington personally designed the buildings attributed to his authorship, though it is unlikely that anyone else would claim the design of General Wade's house, which proved so inconvenient that the cynical Lord Chesterfield advised its owner to buy a house opposite from which he could admire the façade and yet live in comfort.

Colin Campbell was responsible for Newby House, Yorkshire; Stourhead, Wiltshire, which has splendid gardens; and the extraordinary "Castle" at Mereworth, Kent, which is "lifted" from an extravagant design of Palladio's for an Italian villa. Campbell also designed Houghton Hall, Norfolk (1722-25), carried out by Ripley, and published a series of volumes entitled *Vitruvius Britannicus* (1715-25) which purported to survey the work of the best British architects, but in fact mainly displayed the achievements of himself and his friends, and their personal predilections.

William Kent was an artist of high ability and great versatility, who started his main career as a decorator. His best known architectural works are Holkham House, Norfolk (1734-61), executed by Brettingham (113), and the Horse Guards, Whitehall (begun 1742). The latter is a deservedly popular composition, imaginative in massing and sensitive in detail. Kent was a pioneer exponent of the landscape school of gardening, of which more hereafter. Giacomo Leoni designed a number of houses, including Moor Park, Hertfordshire (1720), and the charming little Argyle

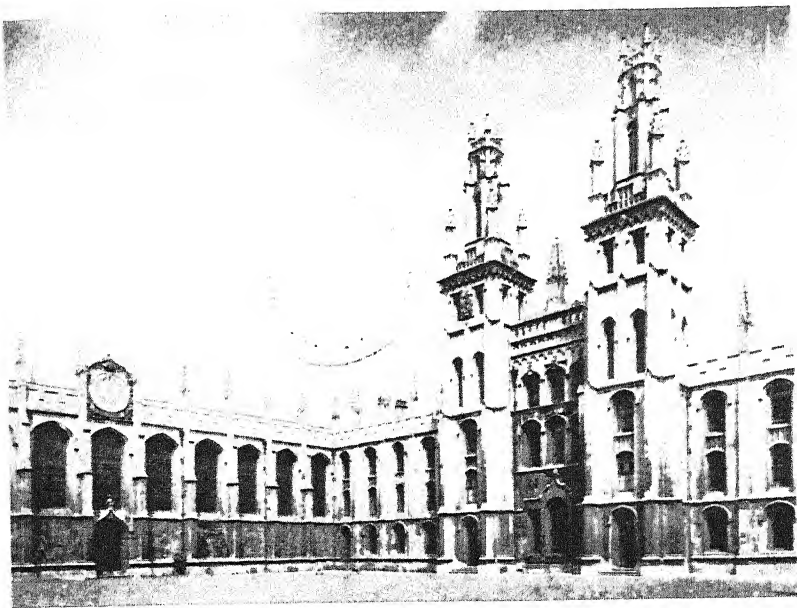
House in Chelsea. Thomas Ripley built the Walpole seat, Houghton, Norfolk, from Campbell's designs, and the Admiralty from his own. Comparison certainly confirms Campbell's authorship of the former. It is outstanding for the fine design and high craftsmanship of its interiors, as also is Holkham.

Yet another contemporary architect—Isaac Ware—reputed to be the son of a chimney sweep, was responsible for Chesterfield House, and published a number of books, including *A Complete Body of Architecture* (1756). One of his suggestions, illustrative of the times, is that servants "of the meaner kind" should sleep over hen houses to prevent theft. In town houses, servants were to be provided with beds to let down from the kitchen ceiling. Flitcroft, the designer of St. Giles-in-the-Fields, London (1731-33); the vast pile of Wentworth Woodhouse, Yorkshire (1740); and Woburn Abbey, Bedfordshire (1747) can only be mentioned, as also George Dance the elder, architect of the Mansion House (1739-53).

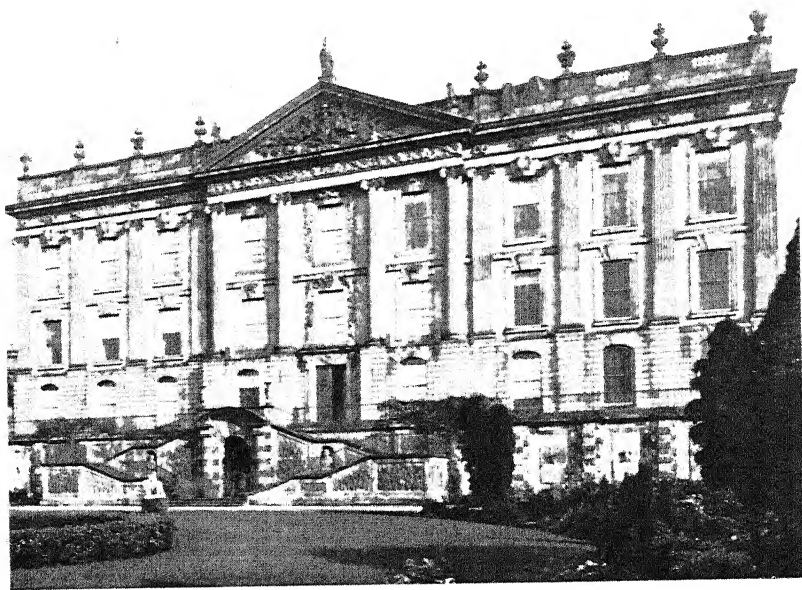
In the provinces, Carr of York, Smith of Warwick and the two John Woods of Bath were producing work comparable with that of the London architects, and usually less ponderous. Smith, the designer of Stoneleigh Abbey, Warwick, and Wood, the elder, who built Prior Park, Bath, belong to the first half of the century; Carr and Wood the younger to the second. "Smith" of Warwick is a figure typical of the confusion attaching to the evidence concerning lesser architects of the period. A John or Francis Smith was mason at Ditchley under Gibbs, and a William Smith of Warwick was mason at the Radcliffe Library. Smith designed Stoneleigh Abbey, Warwickshire; Buntingsdale, Salop; Wingerworth and Sutton Scarsdale, Derbyshire; and also Kirtlington Park, Oxfordshire (in association with Sanderson). It seems evident that there were two Smiths, father and son, in which case we may assume that the son worked on the Radcliffe Library and perhaps at Kirtlington. Mr. Nathaniel Lloyd mentions "James" Smith as designer of the Court House, Warwick (1730). This may be due to some confusion, which is heightened by the introduction of a "Smith of Coventry," architect of Thame Park (c. 1747). May one guess that William Smith, junior, moved to the neighbouring city from Warwick?

In one other respect "Smith" is typical of his age. Most of the well-known architects rose from humble origins, as carpenters, masons, or coach-painters. Only dilettanti like Lord Burlington or Dean Aldrich of Oxford were gentlemen by birth.

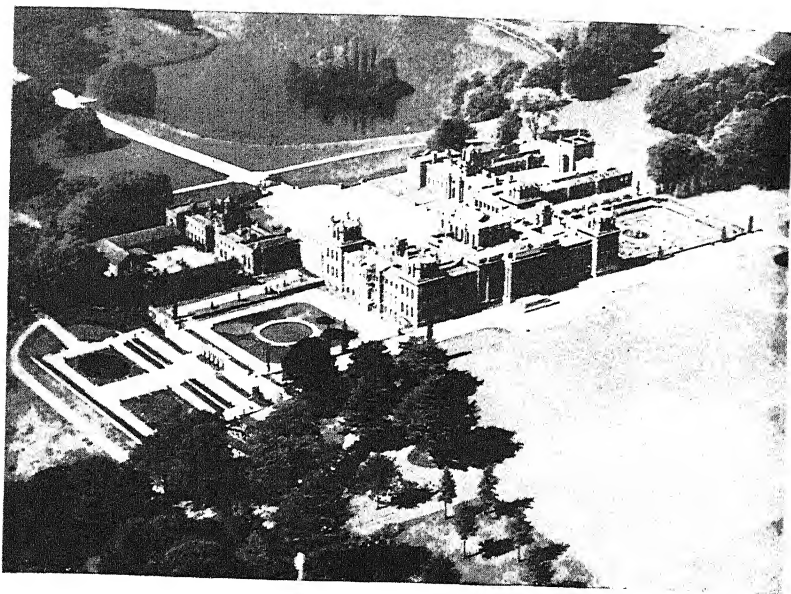
Another fine building in Warwick, the old County Hall (now County Court (completed 1753)) was designed by a gifted amateur, Sanderson Miller, architect of Hagley, Worcestershire—though it is possible that the real designer was Hiorns, his clerk of works, whose name is associated with several other buildings in the town.



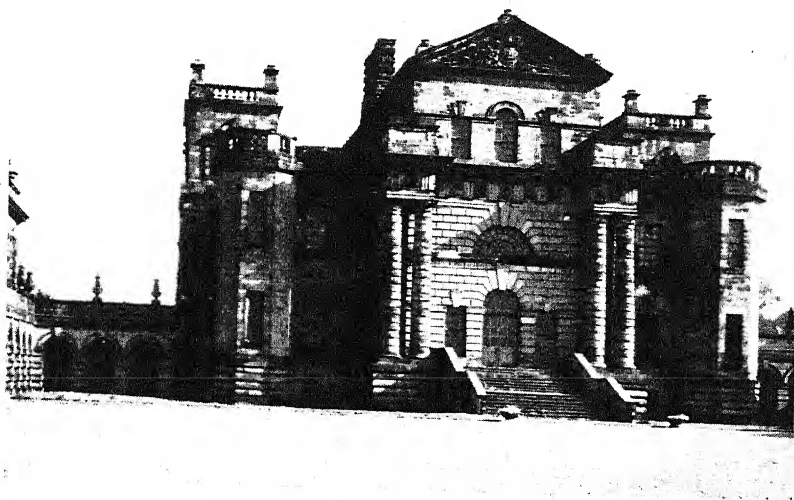
106 THE QUADRANGLE, ALL SOULS COLLEGE, Oxford. 1715-1735. Nicholas Hawksmoor, architect.



107 CHATSWORTH HOUSE, Derbyshire. 1687-1700. William Talman, architect.



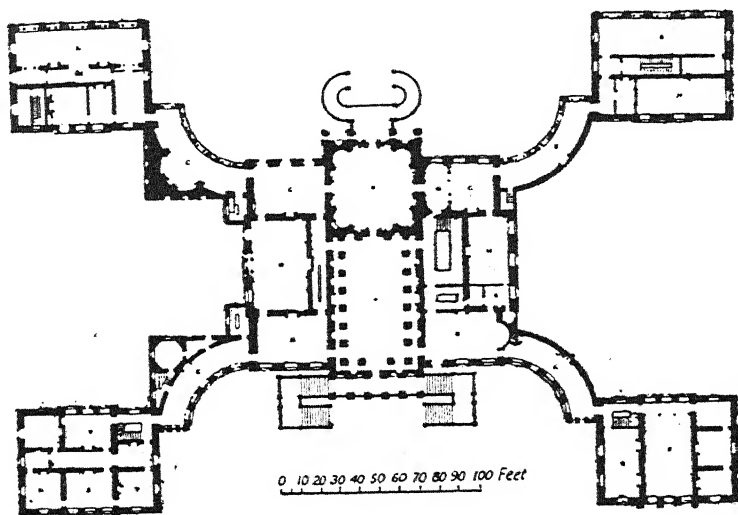
108 BLENHEIM PALACE, Oxfordshire. 1705-1727. Sir John Vanbrugh, *architect*.



109 SEATON DELAVAL, Northumberland. 1720. Sir John Vanbrugh, *architect*.

Carr's most important works were Harewood House, Yorkshire (1760), decorated by Robert Adam; the Crescent at Buxton; and Basildon Park, Berkshire (1776). John Wood completed his father's work in the Circus, and designed the Royal Crescent at Bath (1769-71) (114). Both men retained in their work a vitality which had begun to disappear from that of more sophisticated designers.

The most fashionable architects of the third quarter of the century were James Paine and Sir Robert Taylor, who carried out Ely House, Dover Street, the old Bank of England and started Heveningham Hall in Suffolk, decorated by Wyatt. Paine's finest work was probably Kedleston Hall, Derbyshire, actually executed



Kedleston, Derbyshire, as designed. Only two of the four pavilions were built.

by the brothers Adam. This taking over of other men's designs is one of the curiosities of the century, and seems to indicate the fierceness of professional competition.

Last of the old school of architects were Sir William Chambers, designer of Somerset House (115), and James Gandon, whose best known works are the Custom House and Four Courts, Dublin. The river front of Somerset House has suffered by the construction of the Embankment in front of it, but is still an imposing composition. Chambers introduced the craze for "chinoiserie" and was responsible for the Pagoda in Kew Gardens.

In contrast to the Middle Ages, eighteenth-century monumental architecture depended largely on individual taste, and its study thus becomes only too easily a catalogue of names. In planning, the sensible development which had replaced the old rambling mediæval

t by a compact block such as Coleshill, gave way to the and often pompous efforts of designers to gain effect by and subsidiary wings. This tendency had appeared at ne as early as 1630, and is repeated in Ashdown House in the eighteenth century it became the ruling type, as n at Blenheim, Houghton, Holkham, Kedleston and ie effect was magnificent and doubtless justified the ce of distant kitchens and offices, which was only ble by a multitude of servants. We must not, however, "middling" house, country and town, which was gland's most notable and characteristic contribution to century building. It is found from the early days of the until the close of the eighteenth century, when it shades gency style—a continuity, with little change, of some a half. Smaller Georgian houses occur on the out-ost country towns (3), in stone or brick, simple yet d well-proportioned, with central pediment or roof white sashed windows, often wrought iron gates od piers, the whole forming a real piece of effective

Town houses proper are found in such places as Woburn, Pershore and, above all, Bath. To mention a examples of varying size, there are tilehung Rampyndene, 599); Mompesson House, Salisbury Close (c. 1701); att and Medford House, Mickleton, in the Cotswolds Mote House, Downton, Wiltshire; Melton Constable, Volterton House, Norfolk (by Archer) and Widcombe 1; Boreham House, Essex. There is often interior stinction—wood, or, later, plaster, panelling, carved place and doorways, and from 1660–1700, high relief lings, the latter *in excelsis* at (e.g.) Eye Manor, Hereford-surviving shop fronts of the period, mostly of its later elight for their delicate and sensitive design (123, 124). y part of the century, the gardens of these great houses in lay-out, depending for effect on the parterres, aces, fountains and canals of the school of Le Nôtre, imé" of Louis XIV and designer of the gardens of English gardens were on a more intimate scale than the ormed an admirable setting for their buildings. Here on Court is a fine example of the period. The avenue st an obsession, and the owner of Boughton, North-even petitioned Parliament to let him plant one all ondon. This formal phase is closely associated with the well-known garden designers London and Wise of whom executed Hampton Court gardens), and gave landscape school initiated by Kent, when the park right up to the house.

arrangement by a compact block such as Coleshill, gave way to the ingenious and often pompous efforts of designers to gain effect by colonnades and subsidiary wings. This tendency had appeared at Stoke Bruerne as early as 1630, and is repeated in Ashdown House (c. 1665). In the eighteenth century it became the ruling type, as may be seen at Blenheim, Houghton, Holkham, Kedleston and Stowe. The effect was magnificent and doubtless justified the inconvenience of distant kitchens and offices, which was only made tolerable by a multitude of servants. We must not, however, forget the "middling" house, country and town, which was perhaps England's most notable and characteristic contribution to eighteenth-century building. It is found from the early days of the Restoration until the close of the eighteenth century, when it shades into the Regency style—a continuity, with little change, of some century and a half. Smaller Georgian houses occur on the outskirts of most country towns (3), in stone or brick, simple yet graceful and well-proportioned, with central pediment or roof balustrade, white sashed windows, often wrought iron gates between good piers, the whole forming a real piece of effective vernacular. Town houses proper are found in such places as Blandford, Woburn, Pershore and, above all, Bath. To mention a few country examples of varying size, there are tilehung Rampynden, Burwash (1699); Mompesson House, Salisbury Close (c. 1701); Lower Lypiatt and Medford House, Mickleton, in the Cotswolds (98); The Mote House, Downton, Wiltshire; Melton Constable, Norfolk; Wolterton House, Norfolk (by Archer) and Widcombe House, Bath; Boreham House, Essex. There is often interior work of distinction—wood, or, later, plaster, panelling, carved staircase, fireplace and doorways, and from 1660–1700, high relief modelled ceilings, the latter *in excelsis* at (e.g.) Eye Manor, Herefordshire. The surviving shop fronts of the period, mostly of its later years, are a delight for their delicate and sensitive design (123, 124).

In the early part of the century, the gardens of these great houses were formal in lay-out, depending for effect on the parterres, avenues, terraces, fountains and canals of the school of Le Nôtre, the "bien aimé" of Louis XIV and designer of the gardens of Versailles. English gardens were on a more intimate scale than the French, yet formed an admirable setting for their buildings. Here again Hampton Court is a fine example of the period. The avenue became almost an obsession, and the owner of Boughton, Northamptonshire, even petitioned Parliament to let him plant one all the way to London. This formal phase is closely associated with the work of the well-known garden designers London and Wise (the former of whom executed Hampton Court gardens), and gave way to the landscape school initiated by Kent, when the park was brought right up to the house.

The fashion was now for picturesque grouping, and for vistas continued beyond the park proper by the use of the "Ha Ha" or sunk fence and of the "claire voyée" of wrought iron, which served as boundaries without interrupting the view. Even the surrounding estate was "landscaped," for the period had no admiration for uncurbed nature, which it thought wild and even terrifying. Thus our own countryside of to-day still owes much of its beauty to the conscious efforts of the great landowners of the eighteenth century and the tradition they established. In the park itself the garden designers placed temples, monuments, grottoes and artificial ruins at focal points in order to improve the composition and give romantic interest. Noble clients appear to have regarded the provision of fine garden buildings as much a matter of course as the Victorian householder did the ornaments on his mantelpiece. Stowe, Buckinghamshire, for instance, still retains many such structures, some of them monumental in size. Of the more romantic school, Pain's Hill, Surrey, and Stourhead, Wiltshire, are fine examples.

In the mid century "Capability" Brown was the outstanding figure in garden design. Whatever his faults, he made a splendid setting for Blenheim, where Vanbrugh's great bridge crossed little more than a brook until Brown extended the lake. His nickname is said to have been earned by his habit of explaining that every site had great "capabilities."

Among examples of garden buildings may be mentioned the graceful little bridge at Wilton (designed by Robert Morris, a contemporary of Paine's), with its fellows at Stowe and Prior Park.

Smaller houses were, naturally, less ambitious in their garden designs, but even here ostentation was by no means unknown.

"And now from Hyde Park Corner come
The Gods of Athens and of Rome.
Here squabby Cupids take their places
With Venus, and the clumsy Graces,
Apollo there with aim so clever
Stretches his leaden bow for ever
And there, without the pow'r to fly
Stands fix'd a tip-toe Mercury."

(*The City's Country Box*, Robert Lloyd, 1757.)

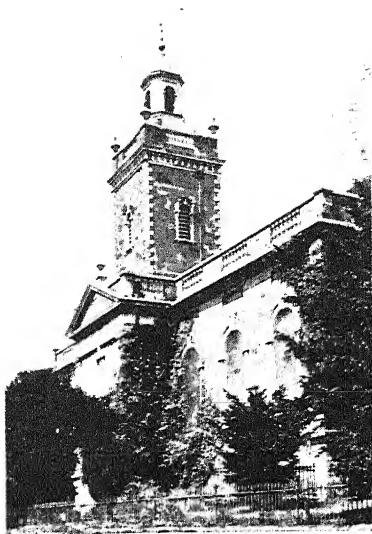
To return to the house itself, and its amenities, a few words may be said on the progress of sanitation. In the early century the bathroom was a novelty, as may be gathered from the account of that at Chatsworth in the journal of Celia Fiennes. "Within this is a batheing-room, ye walls all with blew and white marble, the pavement mixed, one stone white, another black, another of the Red veined marble. The bath is one entire marble, all white, finely veined with blew and is made smooth. It was as deep as one's middle on the outside, and you go down steps into ye bath, big

enough for two people. At the upper End are two Cocks to let in one hott water, ye other Cold water to attemper it as persons please." The bathroom was something of a rarity throughout the century, people relying on the bath tub, which towards the end of the period was developed into the familiar hip bath of our forefathers.

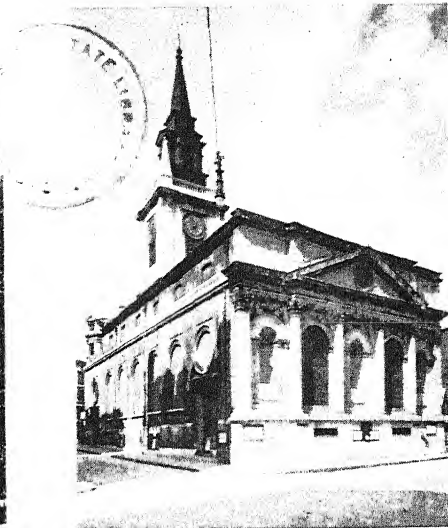
Public bathing was becoming more usual. Even as late as the seventeenth century it was considered a somewhat scandalous affair, and accounts of the rather indiscriminate arrangements for bathers at Bath and Buxton suggest that this view was not without some foundation. At the end of the century the royal physicians even recommended sea bathing, which consequently became fashionable. Weymouth holds the honour of initiating this daring experiment, under the patronage of George III.

The valve closet also began to appear towards the end of the century, and by about 1800 most larger town houses possessed one, though the old-fashioned privy with one or more seats (such as may still be seen in old farm-houses) must have been more usual. By the middle of the century drainage systems were common, though proper ventilation and disposal were still lacking, and the cesspit continued to be used. The theory of drainage had thus advanced little from Italian principles of three hundred years earlier, when Alberti wrote: "Drains are of two sorts; one carries away the filth into some River, Lake or Sea; the other is a deep Hole dug in the Ground, where the Nastiness lies till it is consumed in the Bowels of the Earth." (Translated 1755.)

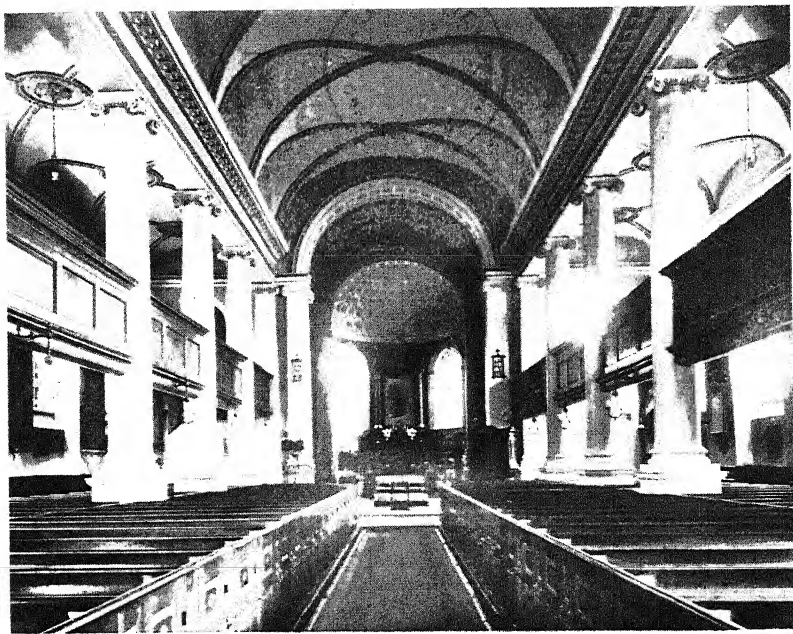
Building was considerably affected by the window tax, which lingered on until 1851. In London, from 1709, windows had to be at least 4 inches back from the wallface as a precaution against the spread of fire. Earlier windows had been flush with the wall—or nearly so—a fashion which continued in the provinces. Windows were almost invariably sashes, the earlier ones having thick glazing bars, 2 inches or more in width. These gradually became more slender, being only about $\frac{1}{2}$ inch wide in fashionable work of the late part of the century. The origin of the sash window is obscure; Mr. Nathaniel Lloyd considers it to have been an English invention of the late Middle Ages, though it did not become popular until late in the seventeenth century. In the eighteenth century smaller buildings owe much of their charm to their sash windows, which diminish in size on the upper floors. The size of the panes usually remained standard, attic windows being only two or three panes high, instead of four or more on the principal floor. The width of sash windows was fairly well standardized in this period, just as the width of mullioned windows had been at an earlier one. The brick tax was not introduced until 1784, and lasted until 1850. It helped to popularize tile hanging and weatherboarding, the



110 BLANDFORD CHURCH, Dorset. 1735.



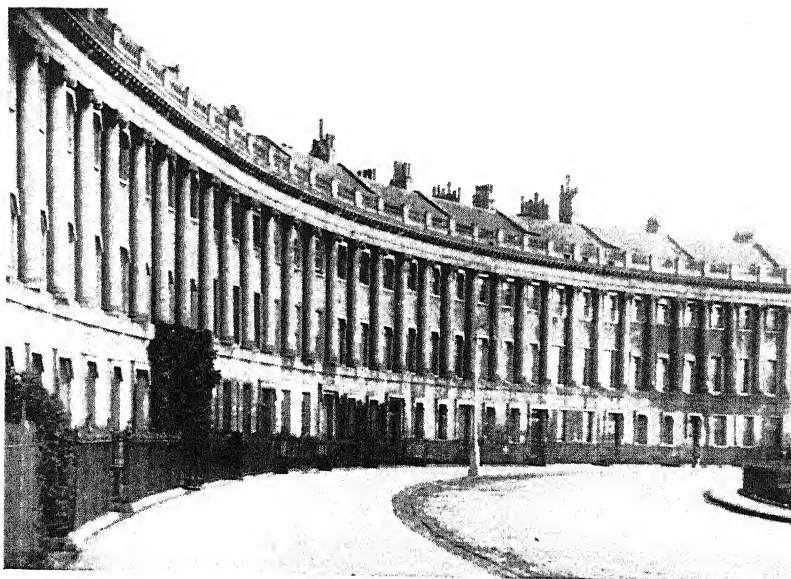
111 ST. LAWRENCE JEWRY, London (now destroyed). Sir Christopher Wren, architect. 1671-1680.



112 THE INTERIOR OF BLANDFORD CHURCH, Dorset. John and William Bastard, architects.



113 HOLKHAM HOUSE, Norfolk. 1734-1761. William Kent, *architect*.



114 ROYAL CRESCENT, BATH, Somerset. 1767-1769. John Wood (the younger), *architect*.

former even simulating brickwork, as at Lamb House, Rye (garden house).

Inside, the outlook was usually practical, except in the largest houses. For instance, an architect of 1724 recommends that "Eating rooms should be wainscotted, for as bare walls are not tollerable in this Age, so hangings of all Stuffs are apt to be impregnated by the Fumes of Victuals or Tobacco, if smoking is frequently used, and the smell will not be easily got out." By this date oak panelling was already dying out in favour of painted pine. Where it was preserved it was frequently painted, for the eighteenth century did not blench at strong measures. Plain walls were hung with tapestry, embroidery, velvet, silk, damask, linen or cotton; even baize and serge were used in less important rooms. These materials no longer hung loose, but were stretched on frames. Embroidery was fashionable early in the period, but was largely driven out by the craze for playing cards, which tempted the ladies of the house to neglect their handiwork. Wallpaper was also coming into fashion, and was painted or hand printed, usually with European versions of *Chinoiserie*, though tapestry, wood, marble and silk were imitated. The full horror of machine-printed wallpaper was reserved for the next century.

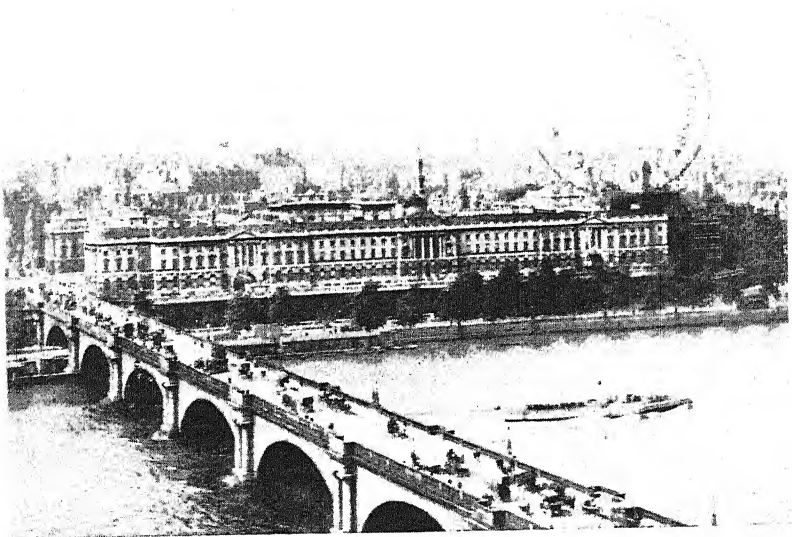
Turkey carpets and painted floor cloths were also in use, economy being responsible for placing them under tables or beds to avoid undue wear. Walnut and mahogany replaced oak for furniture, which became more comfortable and graceful, as well as more plentiful than in previous centuries. This tendency is seen as early as the days of Charles II, and under William and Mary the use of walnut was effectively adopted, but it reached its climax in the days of Chippendale (1709-79), whose name has become a household word. By 1749 John Wood of Bath was claiming that during the previous twenty-one years walnut and mahogany furniture had replaced oak, carpets had been introduced and rooms wainscoted and painted. Mirrors had been installed, brass hearth furniture had replaced iron, and in short "the best chambers of Gentlemen were then just what the Garretts for Servants now are."

There was good glass but little china. Pewter was in frequent use, with glazed earthenware for better occasions, porcelain being a luxury. It was now usual for the host to provide the cutlery, and the guest no longer brought his own. Artificial lighting still depended mainly on the tallow candle, which often smelt abominably. Wax was a luxury.

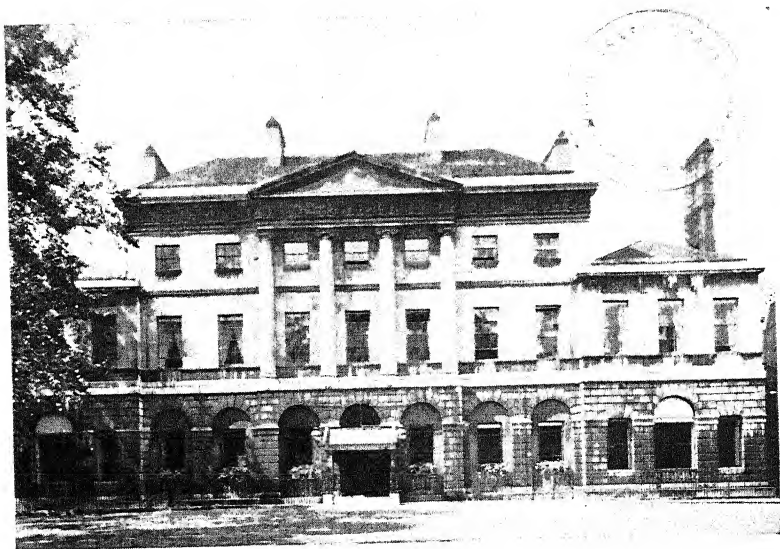
The third quarter of the century was the Augustan age of the English Renaissance—the age of Dr. Johnson, Gray, Goldsmith, Reynolds and Gainsborough. Architecture, perhaps, was losing some of its earlier vigour, and was not quite so accomplished as some of its exponents thought it, for they were convinced that

it had never been more perfect—always a dangerous state of mind. Civilization after fourteen hundred years had at last climbed back to the eminence from which it had fallen with the collapse of Rome, and was already looking beyond that peak of progress. It was thus no mere accident that Gibbon chose as his subject the closing epoch of the Roman Empire, for there is always a tendency to look back to the parallel periods of the past for guidance and precedent. Much the same spirit must have animated Robert Adam, when he spent five weeks measuring up the ruins of Diocletian's palace at Spalato (Split) on the Dalmatian coast of the Adriatic with the assistance of three draughtsmen in 1757. He returned to England the following year, and with his brothers, of whom James is the best known, soon built up an extensive practice. The screen and gateway of the Admiralty (1760); Syon House, Isleworth (1761-2); Lansdowne House (1745) (116); Kedleston (1761-5); Kenwood (1764-7); and Stowe, Buckinghamshire (c. 1777) are among the best known works of the Adam brothers, though Kedleston owes its plan to Paine, and Stowe was carried out by an Italian of the name of Borra. All are marked by graceful and delicate late Roman ornament, by the use of which the Adams claimed to have revolutionized contemporary design. Such changes may not appear very startling to us, but they certainly broke away from the strict Palladian precedent, in which Sir William Chambers was almost the last surviving practitioner. Their plans are notable for the introduction of varied and interesting shapes in the principal rooms, which desert the old square and oblong in favour of the circle, oval and apsidal, often very effectively grouped. Another and less desirable innovation of the Adam brothers was their wholesale indulgence in speculative ventures, of which the Adelphi buildings was the largest and financially the most disastrous example. The Adams were more successful as decorators, their ceilings (with painted panels by Angelica Kauffmann, Zucchi and Rebecca) and fireplaces being particularly fine (117, 118), while their furniture is also excellent of its kind and in its original setting. Their influence is seen in the designs of Chippendale, Sheraton and Hepplewhite, with whom they perhaps collaborated.

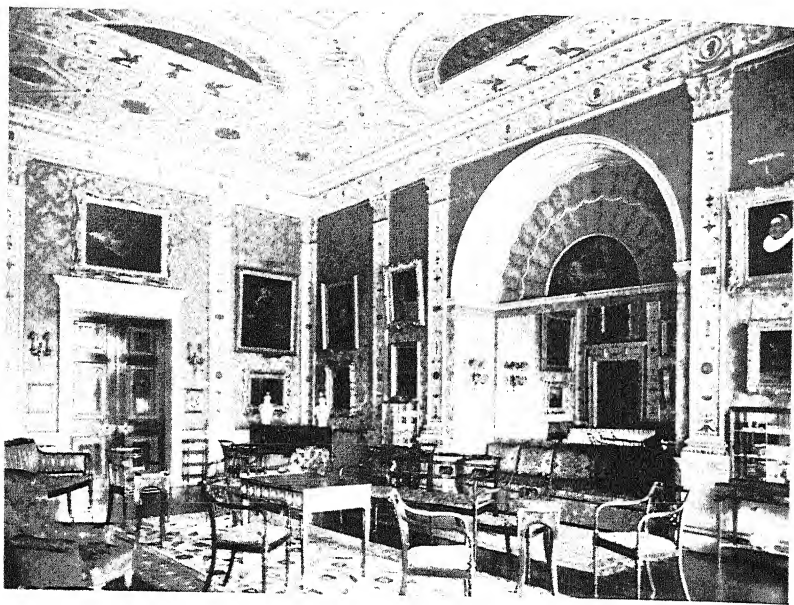
Another but later architect who ventured largely in the speculative field was John Nash, best known for his planning of Old Regent Street, intended as a processional way from the Regent's residence (Carlton House, designed by Henry Holland 1788-9 and pulled down 1840) to the new Regent's Park, which he also laid out (125). Nash's handling of architectural problems was accomplished, if a trifle superficial. Critics have carped at the "easy theatricalities" of Nash, but at least he helped to give to Regency London that refined charm and unity which later ages have admired without being able to recapture. Now, alas, it survives only in contemporary



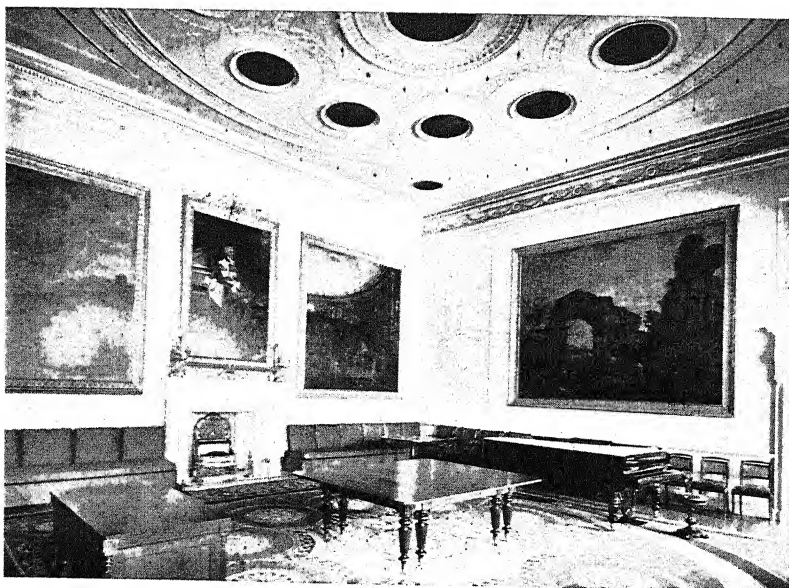
115 SOMERSET HOUSE, London. 1770-1796. Sir William Chambers, *architect*.
 OLD WATERLOO BRIDGE. 1815. Sir John Rennie, *Engineer*. (Now demolished.)



116 LANSDOWNE HOUSE, London (now rebuilt). 1765. Robert Adam, *architect*.



117 LANSDOWNE HOUSE, London. THE DRAWING ROOM. 1765. Robert Adam, *architect*.



118 HAREWOOD HOUSE, Yorkshire. THE MUSIC ROOM. 1760. Robert Adam, *architect*.

illustrations, such as the steel engravings of T. H. Shepherd and the delicate lithographic prints of Thomas Shotter Boys. This period is notable for the almost universal use of stucco, and here again Nash was popularly credited with its introduction on so great a scale, as may be seen from the following well-known and oft-quoted jingle in the contemporary press:—

“Augustus of Rome was for building renowned,
For of marble he left what of brick he had found,
But is not our Nash too a very great Master,
He finds us all brick and he leaves us all plaster.”

Nash and his successors George Basevi and Decimus Burton carried the spirit of the eighteenth century well into the nineteenth, to which much even of Nash's work belongs. Of Nash's contemporaries we have already noted Henry Holland as the designer of Carlton House. Two other well-known men must also be mentioned—James Wyatt and Sir John Soane. Soane was easily the greater architect, perhaps the greatest of the period, though he tends to be overshadowed by the ubiquitous Nash. His chief work was the Bank of England (121), and he also designed Dulwich picture gallery, and several houses, of which Tynningham, in North Buckinghamshire, and Moggerhanger, Bedfordshire, are the best known. His own house is now the Soane Museum in Lincoln's Inn Fields.

Garden design deteriorated to what has been styled the “Specimen Tree” period, though its lowest ebb occurred in the following century. The tendency for gardens to become a mere collection of assorted conifers, curiosities and rare plants was already apparent at Kew.

Much of the architecture of this late phase of the English Renaissance is artificial and revivalist in character. The naïf Gothic of Wren and Hawksmoor gave way to more conscious attempts at antiquarianism, such as Sanderson Miller's tower (1750) marking the spot at Edge Hill from which Charles I surveyed the battle. About the same time Horace Walpole was building his house at Strawberry Hill in the “Gothick” manner. As early as 1742, Batty Langley, an indifferent architect but author of innumerable standard plate works of reference, published rules for Gothick “Orders.” These need not be taken seriously, but by the end of the century (1805 to be precise) we find Soane designing a “Tudor” muniment room at Stowe.

Nor can we omit mention of Fonthill Abbey, Wiltshire, built by Wyatt for Beckford as an imitation of a Gothic convent, on a large scale, with a tower 278 feet high. Completed in great haste at a cost of over a quarter of a million pounds, it was pulled down after a partial collapse due to the fall of the tower a few years later.

James Wyatt, a really great classical designer and decorator, also

undertook the restoration of many cathedrals and churches with an enthusiasm and lack of knowledge which later earned him the name of "The Destroyer." He it was who refurbished Durham by scraping two inches of stone off its exterior!

A classicist, James Stuart, published with Nicholas Revett *The Antiquities of Athens* in 1762, which eventually bore fruit in the Greek revival of the late eighteenth and early nineteenth centuries. All these movements bear witness to the growing staleness of Palladian design, from which architects turned to other sources for novelty. This is the setting which produced such extravagances as the Brighton Pavilion (begun 1784) and Sezincote in the Cotswolds, owing much to Moslem and Hindu inspiration respectively.

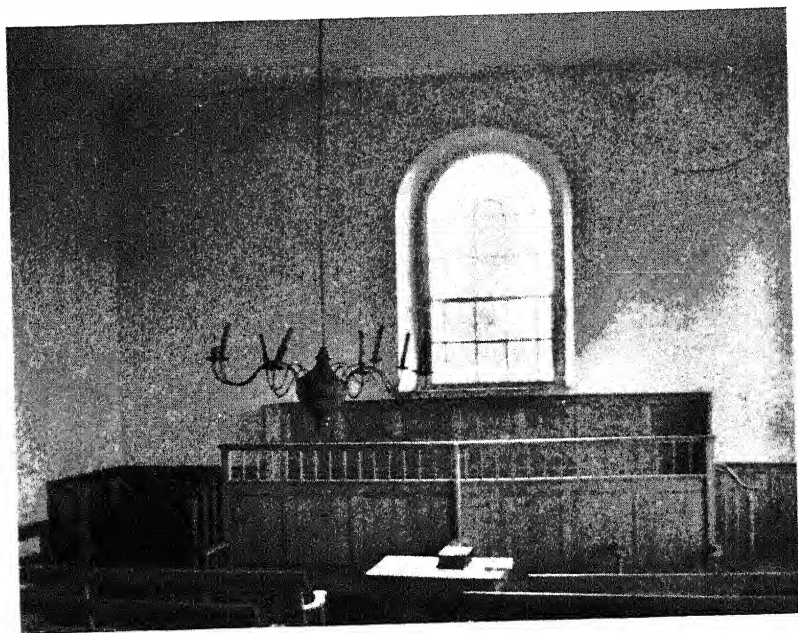
Lesser buildings throughout the period continue to show English classical design at its best. There is hardly a town which does not preserve at least some dignified houses of stone or brick with white painted sash windows and an elegant door. From the early period of Queen Anne's Gate (105) to the Regency houses of Cheltenham or Brighton, the standard is maintained. Rye, Sussex; Farnham, Surrey; Downton and Highworth, Wiltshire; Ilminster, Honiton, Sidmouth, Dorchester, Salisbury, Newbury and Chichester are among the many Southern towns rich in such work. Bath, Melksham, Tetbury, Chipping Campden, Burford, Stamford, Buxton, Harrogate, Richmond (Yorkshire), Pickering, Alnwick and Wooler show stone examples, while Wells, Warwick, York, Colchester, King's Lynn, Spalding, Shrewsbury, and many another town reveal houses which are masterpieces of their kind, whether they have the substantial trimmings of the early part of the century or the delicate detail and bow windows of the Regency. Inside there are pleasant airy rooms, some good hob grates, an elegant staircase and perhaps some painted plaster panelling.

Eighteenth-century shops, too, are delightful. There is a famous one in the Haymarket, an even finer in Artillery Lane, Spitalfields, and many still survive up and down the country, such as the chemist's shop at Bridport, Dorset (123), a gem of its kind, though actually belonging to the early part of the following century. A greater appreciation of the value and possibilities of such shop fronts would preserve many of these examples, which are now in danger of being replaced by quite ordinary designs, lacking both merit and advertising value. The same pleasant dignity can be seen in many a farm-house, for the country's economy was still largely rural. In 1800 the population of London was only 800,000, while Manchester, Liverpool and Birmingham were quite small places, though industrialism was growing fast, and people were flocking to the towns, where they often lived under appalling conditions.

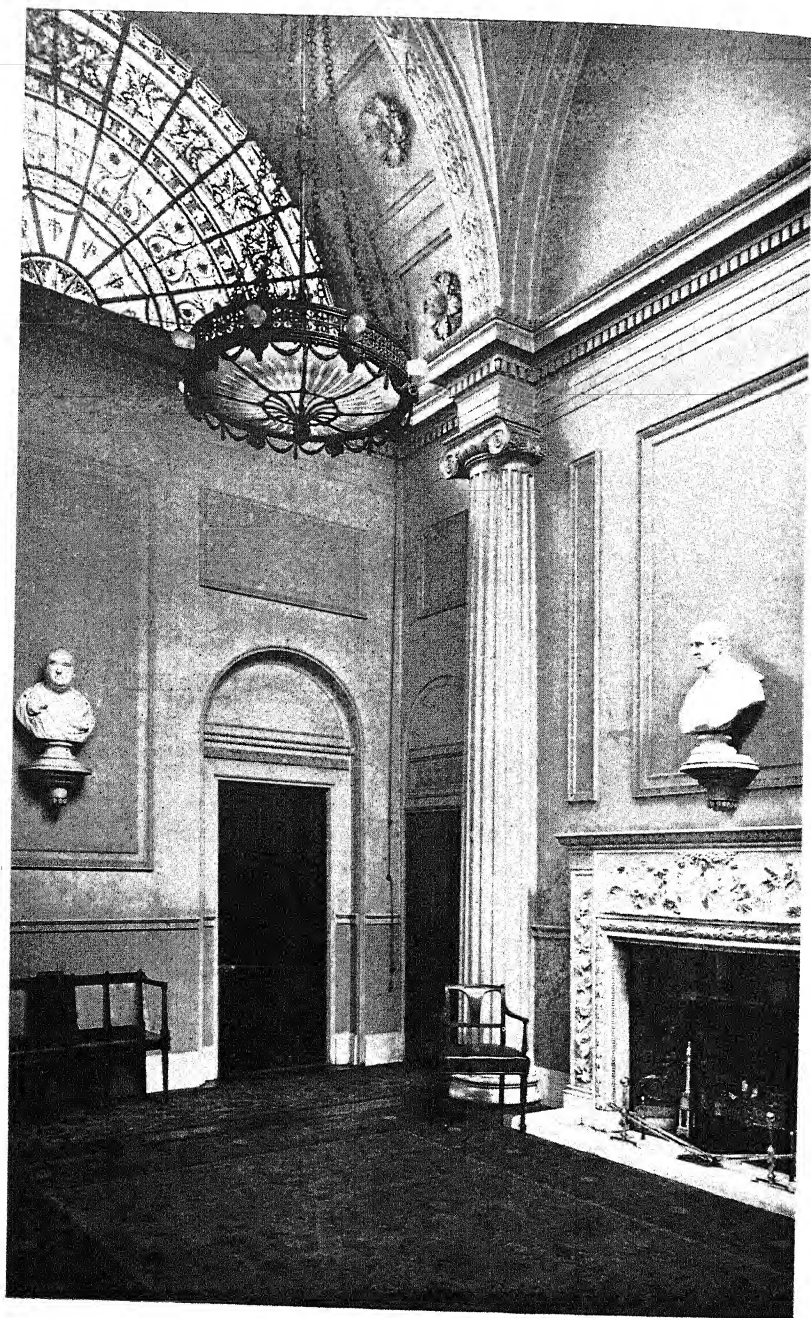
Something should be said here on the development of town



119 MILTON ABBAS, Dorset. A "model village" of 1786.



120 SPICELANDS MEETING-HOUSE, near UFFCULME, Devon. *Ca.* 1700.



121 THE GOVERNOR'S ROOM, BANK OF ENGLAND, London (now replaced). 1800.
Sir John Soane, architect.

planning in the eighteenth century. There was nothing in this country comparable with the grandiose plans of the Continent, which yet served as models for the more modest schemes of the English towns. As one might expect, formality was the key-note of these designs, though the national habit of compromise permitted a less rigid arrangement of forms than might have been demanded by the canons of contemporary taste. Bath is the best known example, followed at the close of the period by Cheltenham and Leamington. London meanwhile developed its typically English squares of town houses, and very effective they are. An occasional crescent gave dignity to other towns, as Buxton, Exeter, etc. It is typical that the best known examples of town-planning should have been connected with the gentry, for in the eighteenth century architecture was primarily an aristocratic art. Even so, such planning was comparatively piecemeal, and few gentlemen would have been content with so incomplete a scheme applied to their own estate.

The church never achieved the pride of place in the eighteenth century that it held in the Middle Ages, but many churches of the period remain, and are usually sensible and even refined in character. Blandford, Dorset (c. 1735) (110, 112), and Banbury, Oxfordshire (c. 1790), may be considered fairly typical. St. Chad's, Shrewsbury (1790-92), is a more pretentious circular design, less successful without, though its interior is both practical and effective.

Nonconformist chapels are first represented by the Quaker meeting houses of the closing years of the seventeenth century, such as Spicelands, near Uffculme, Somerset (120), or Jordans, Buckinghamshire, built before the ban on nonconformist buildings. Then came the early Wesleyan chapels, and by the early nineteenth century such buildings were becoming quite imposing structures, though they had not yet acquired the vulgar pretentiousness or commonplace monotony of the Victorian era.

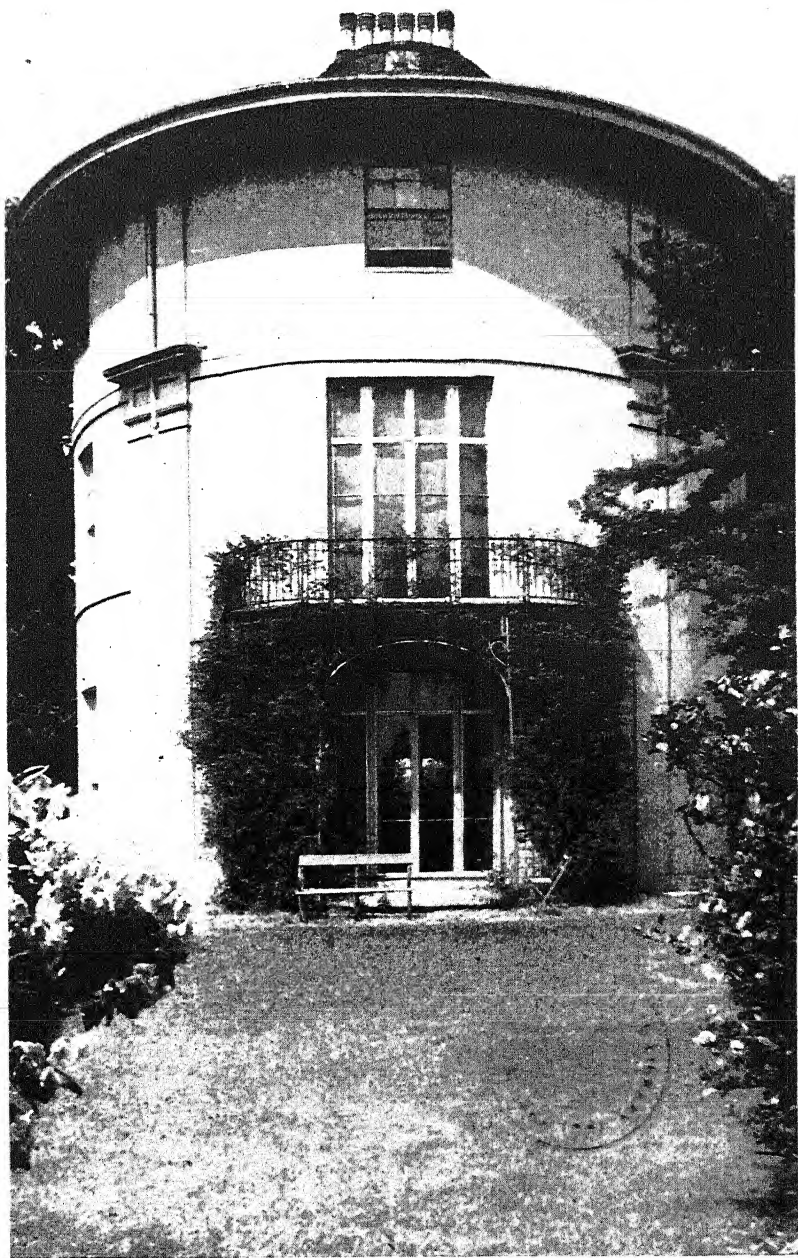
Inns might well themselves form the subject of a book, and have, in fact, frequently done so. The eighteenth century was the golden age of hostelries, and their great stables and yards were busy with traffic almost up to the middle of the following century. Nearly every country town boasts a good example, usually with ballroom and assembly rooms. Among them might be mentioned: the White Hart, Salisbury; the George, Grantham; the Rutland Arms, Newmarket; the Royal Clarence, Bridgwater; the Queen's, Cheltenham; and the Green Dragon, Hereford. Some of them have, unfortunately, been disguised by sham half timber, in an age which has failed to appreciate their qualities, and is so afraid of life that it seizes every opportunity to put the clock back. Quite a few inns retain ancient bowling greens and cockpits. The golden age of the stage coach was a mushroom development of the late century, soon displaced by the era of railways.

Even in such details as tombstones the eighteenth-century mason left his mark. The design is often delightful, and churchyards such as March, Cambridgeshire, and Painswick, Gloucestershire have many fine examples.

Another feature of this period, deserving more space than can be given to it here, is the construction of "follies" by wealthy and slightly eccentric landowners, endowed with sufficient means to portray even their humours in solid building. Lansdown Tower at Bath, and the Dashwood mausoleum overlooking West Wycombe may serve as examples of an art which is really an extension of the idea of the garden pavilion.

Standards of living among the poor were still very low, and only during this period were livestock finally driven from the house itself. As late as 1792 *The Gentleman's Magazine* records the survival at Naseby, Northamptonshire of the old practice of daubing cottages with horse dung. Every year this was scraped off for use as fuel and a new coat applied. Yet at Milton Abbas, Dorset we find an early example of a model village of considerable distinction (1786) (119), though it must be admitted that this exists only through the selfishness of the local landowner, who demolished the old village in order to make room for his new mansion, designed by Sir William Chambers in a mildly "Gothick" manner.

The industrial revolution is represented by the mills of the Stroud valley and the Pennines, and sensible and unpretentious buildings most of them were. Cast iron also begins to appear both in railings and such details as pumps and gateposts, though here again we must turn to the next century for most of the examples.



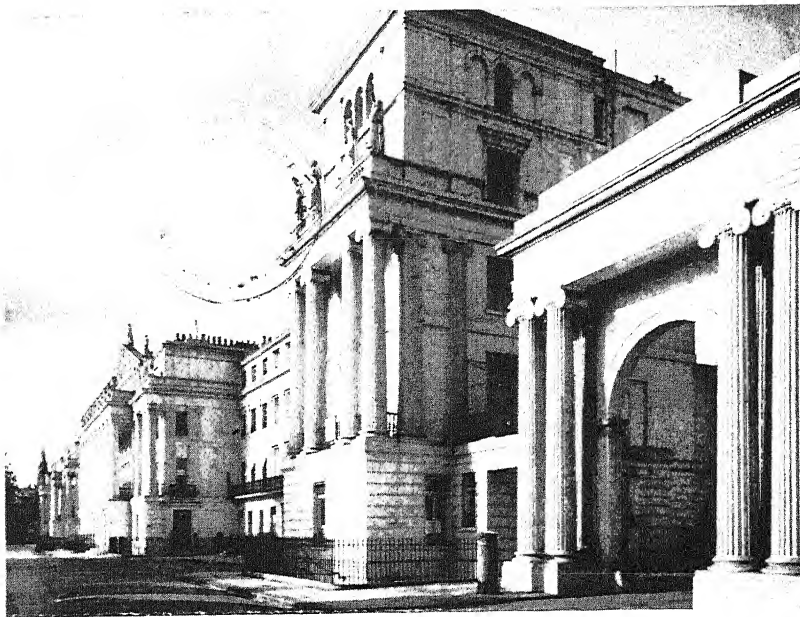
122 REGENCY VILLA AT HAVERING-ATTE-BOWER, Essex. Ca. 1810.



123 SHOP FRONT AT BRIDPORT, Dorset. Ca. 1800.



124 SHOP FRONT AT 24, STONEGATE, York. Ca. 1870



125 CUMBERLAND TERRACE, REGENT'S PARK, London. *Cl.* 1820. John Nash, *architect*



126 THE ATHENÆUM CLUB, PALL MALL, London. 1829-30. Decimus Burton, *architect*.



127 ST. GEORGE'S HALL, Liverpool. 1839-1854. H. L. Elmes, *architect* (completed by C. R. Cockerell.)



128 GROSVENOR CRESCENT, BELGRAVIA, London. 1825-1826.

THE NINETEENTH CENTURY

THE early years of the nineteenth century saw a continuation of the graceful and simple style of the last years of the preceding century. To this period belong Nash's Regent Street, Soane's Pitzhanger Manor, Ealing (built for himself, first started by Dance the younger, and now a public library); William Wilkins' National Gallery (1827-38)⁽⁴⁾, and Burton's Athenæum Club, Pall Mall (126). If the broken outline of the National Gallery (4) shows the first seeds of the romantic movement, the heavy pedantry of the British Museum certainly emphasizes the least practical aspect of the classic school; while hardly more satisfactory is St. Pancras new parish church (1819), designed by A. W. Inwood "in the Greek manner." Far pleasanter were the stucco houses of Brixton, Richmond, Brighton, Sidmouth, Cheltenham and Leamington, and even the rather more pompous buildings of Belgravia and Kensington; while a better example of Greek influence may be seen in the Stamford Hotel at Stamford, Lincolnshire.

The classical school never completely lost its influence throughout the century, and may be traced through such buildings as Birmingham Town Hall, designed by Hansom, inventor of the cab, and the branch Banks of England at Manchester, Liverpool and Bristol (129) designed by C. R. Cockerell, architect of the Ashmolean Museum, Oxford, to many provincial municipal buildings in the dull or eclectic classic of the late century, such as Mountford's Sheffield and Battersea Town Halls, Barry's Halifax Town Hall and Young's War Office. More distinguished is H. L. Elmes' St. George's Hall, Liverpool (1841-54) (127), influenced by the severe German classic of Schinkel.

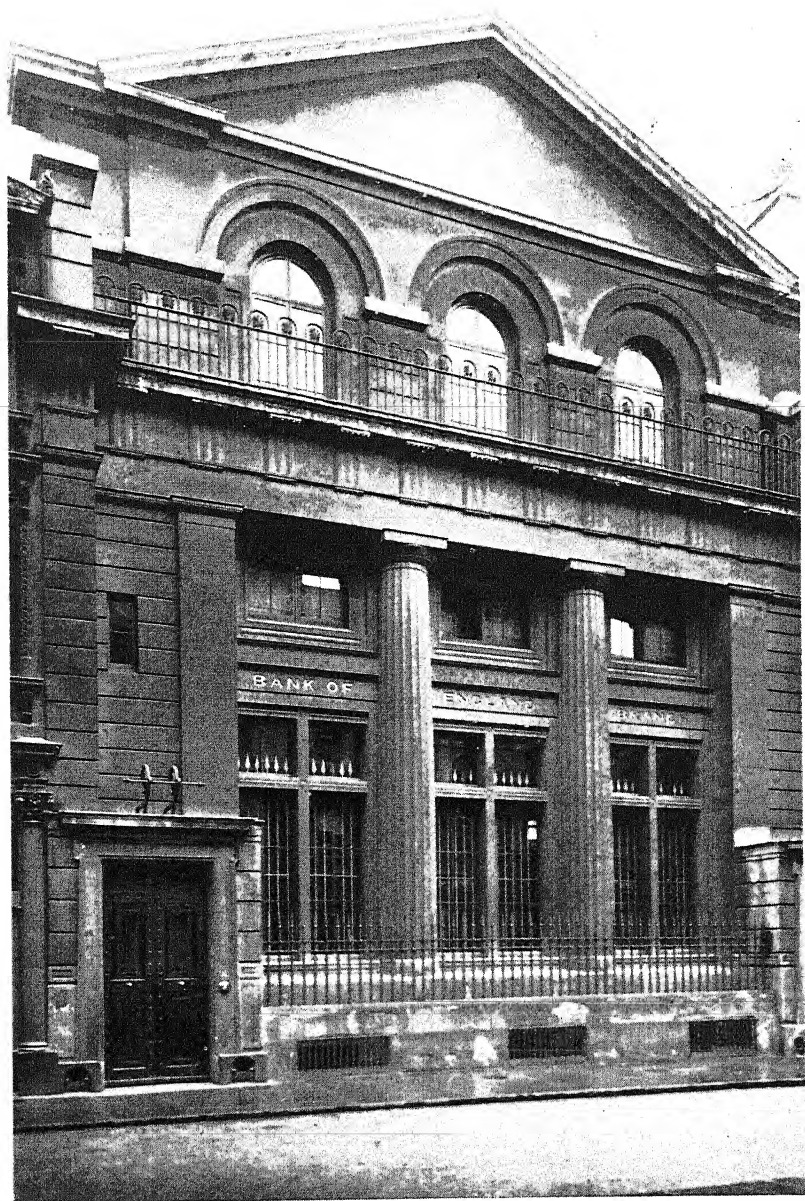
Meanwhile the wish for novelty, guided by the romanticism of such writers as Sir Walter Scott, and by a growing nationalism, was finding an outlet in a return to Gothic. This tendency is illustrated by an illuminating passage in Viollet le Duc's *The Habitations of Man in all Ages*, written about the middle of the century. "Those enthusiasts for Greek and Roman forms—for in their naïve admiration they were accustomed to confound them, utterly different though they were in their principles and in its expression—have succeeded in misleading Europe for two or three centuries. . . . Nevertheless, a generation of inquirers has arisen. . . . Every civilised nation has begun to inquire—and the inquiry will be prosecuted with increasing ardour—whence it comes and what are its elements; and it is consequently endeavouring to adopt those original forms in art which are adapted to the genius and require-

ments of the race to which it belongs. This movement is already very apparent in England, in Germany, in Sweden, and in Russia, and it is becoming daily more marked."

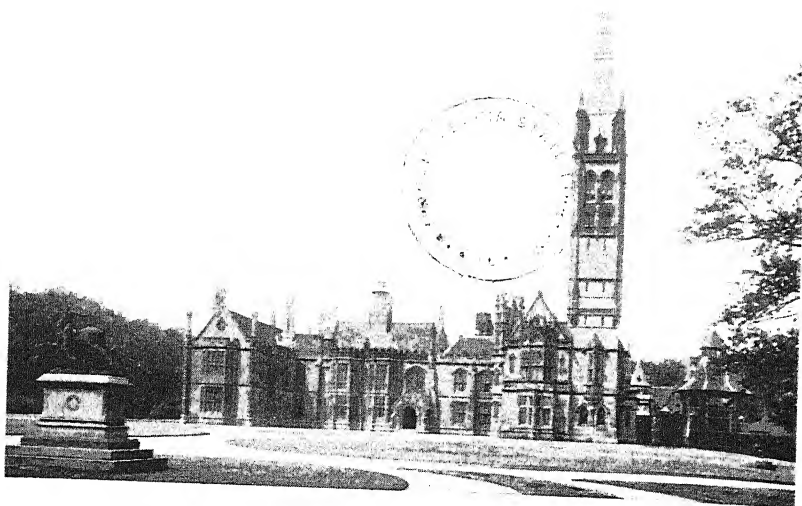
Sir Jeffry Wyattville (nephew of James Wyatt) had remodelled Windsor Castle in 1826, thus intensifying the fashion for castellated mansions, but it was Sir Charles Barry who was to turn the scales in favour of the Gothic revival. In 1835 a competition was held for new Houses of Parliament, the old buildings having been destroyed by fire the previous year. It was specifically laid down that the design should be Gothic or Elizabethan, so firm a hold had the idea of a national architecture gained on men's minds. The competition was won by Barry, who had the assistance of A. W. N. Pugin in detailing his designs—a combination which had already produced the able Gothic composition of King Edward's Grammar School, Birmingham (since demolished). The new parliament buildings were classical rather than mediæval in plan, except for the concession of an asymmetrical arrangement of towers, while the principal elevational motif is repeated at Highclere Castle, Hampshire, but with Elizabethan classical trimmings. Pugin later rose to fame as the apostle of the Gothic revival, which caused him to be credited with a far greater share in the design of the Houses of Parliament than can fairly be admitted. There was a lively controversy, but the main design is clearly Barry's, enlivened though it is with Pugin's brilliant Gothic detail. Though the building is thus hybrid in style, it ranks as one of the finest compositions of the century. In some respects it anticipates the conception of Stockholm Town Hall, so much admired in the present century, and its able plan was reproduced in the revived Gothic Parliament house at Buda-Pesth.

Barry himself designed with equal facility in the classic or Gothic manner, his later work, such as Halifax Town Hall, showing deplorable tendencies towards eclecticism. Pugin meanwhile carried on a crusade for a Gothic revival, in which the scholarly Cockerell proved no match for his ardour, and thus arose the "Battle of the Styles" which raged for the remainder of the century.

In church buildings, a return to Gothic was fairly easy and coincided to some extent with a burst of high church fervour. Pugin himself was filled with a burning enthusiasm for what he called the "Christian" style, and designed no fewer than sixty-five churches, besides convents, monasteries and schools. St. Barnabas, Nottingham; St. Marie's, Derby; St. Giles, Cheadle; and St. Mary's, Stockton-on-Tees may be cited. His domestic work is both interesting and accomplished, though more forced and artificial in its deliberate stylism. Scarisbrick Hall, Ormskirk, Lancashire (130), is probably his finest design. Alton Towers, Staffordshire, is also



129 THE BANK OF ENGLAND, Bristol. 1835. C. R. Cockerell, architect.



130 SCARISBRICK HALL, ORMSKIRK, Lancashire. 1837-1867. A. W. Pugin, *architect*.



131 HARLAXTON MANOR, Lincolnshire. 1837. Anthony Salvin, *architect*.

largely his. His influence was maintained as much by his writing as by his work. *Contrasts* (1836), *True Principles* (1841), *Apology for Contrasts* (1843) and *The Present State of Ecclesiastical Architecture* (1843) took the younger generation of architects by storm.

Meanwhile country house architects such as Anthony Salvin were producing neo-Jacobean designs of fair merit, with such results as Harlaxton Manor, Lincolnshire (131), and Scotney Castle, Kent (1837). Style was evidently in the melting-pot, as it had been three hundred years earlier, but there was now no more advanced civilization to resort to for precedent, and men naturally turned back to the origins of their art. They were more conscious of the need to escape from existing bonds than of any goal to be aimed at, and consequently explored every field which seemed to offer a solution to their problems, which as yet were but half formulated.

There was, however, one school of thought which cared little for style. The engineers who built the cast-iron bridge at Coalbrookdale as early as 1773-79 (Wilkinson and Daly) were succeeded in the nineteenth century by Telford, designer of the Menai Suspension Bridge (1819-26), Stephenson, designer of the Britannia tubular bridge, Anglesey (1846-54), and Brunel, whose suspension bridge at Clifton was begun in 1831, and after being abandoned for a long interval was completed in 1864 by utilising much of the material from the same designer's suspension bridge at Charing Cross. These engineering works might have stylistic details added to them by some draughtsman, but such flourishes were inessential, and indeed better omitted. It was this school which gained its first triumphant success with the Crystal Palace (134), though its designer—Sir Joseph Paxton—was not a qualified engineer.

The background of this success was indeed dramatic. A competition for the housing of the Great Exhibition of 1851 had yielded no fewer than two hundred and forty-five entries, none of which was considered suitable by the Committee, which included Barry, Cockerell, Brunel and Stephenson. An amended design, credited to Brunel, was produced, but even this required fifteen million bricks, and it was manifestly impossible for it to be built in the year still available before the opening date, to say nothing of the damage which would be caused to Hyde Park, where it was to be erected. It was at this juncture that Paxton appeared on the scene. Head gardener to the Duke of Devonshire, and successful business man, he had already built at Chatsworth the Palm House (1837, since destroyed), and was building the Lily House (1850). At a meeting of the directors of the Midland Railway, he scribbled on a blotter a design based on the Chatsworth Palm House, and showed it to members of the Exhibition Committee. Encouraged by them, he hurriedly produced proper drawings, which were published in the *Illustrated London News* in July 1850. The scheme was as hurriedly adopted

by the committee, which was at its wits' end for a solution to the problem, and by the spring of 1851 the building was ready for use.

This incredible triumph naturally caused a great stir, and the building was heralded as the forerunner of a new era in design. So—in a sense—it was, but immediate results were disappointing. It was soon found that the uses of a conservatory had decided limitations for permanent building work, and the construction was not easily translatable into other forms. The Hosannas of those who had prophesied a new world therefore died away, and the Crystal Palace, removed to a permanent site at Sydenham, lapsed into obscurity until it was exhumed by the modern school in a blaze of glory, equalled only by the fire which finally consumed it in 1936.

Architectural style was thus little affected by the clear logic of Paxton's design, though it continued to suffer from the intolerable exuberance and vulgarity of detail which characterized the exhibits themselves. We must, however, except from this charge such straightforward and workmanlike designs as King's Cross Station (L. Cubitt, 1852), the composition of which has considerable merit.

Generally speaking, churches and colleges continued to favour the dim religious light of mediæval revivalism, business and municipal corporations clung to a debased, uninspired classic, while lesser buildings compromised with hybrid forms of the type popularly associated with the reign of Elizabeth, though the growing use of highly coloured machine-made materials made them even more unrecognizable as period designs. In the first category, R. C. Carpenter's Lancing College, B. Ferrey's St. Stephen's, Westminster, and St. Mary, Chetwynde, Shropshire, form a link with Pugin. William Butterfield launched into polychromy in All Saints, Margaret Street, London (1859), and Keble College, Oxford, the former meeting with the approbation of no less a critic than Ruskin.

The most prominent and prolific ecclesiastical architect of the period was Sir Gilbert Scott, who not only designed many new churches, but restored and remodelled old ones almost throughout the country. A man of high principles, he was convinced that Mr. Pugin had "shown the particular rightness of the Gothic style for any building of a Christian nation" (letter to *The Ecclesiologist*). He met his match, however, in Lord Palmerston, whose return to office in 1859 prevented the execution of Scott's Gothic design for the Foreign Office. However "right" that style might appear to its author, Lord Palmerston would have none of it, and insisted upon an Italianate design, which Scott reluctantly provided with the assistance of M. Digby Wyatt. It is said that Scott used his rejected elevations on St. Pancras Station, with the design of which he seems to have been wholly delighted. To us, it is no better recommendation of high principles than his rather dull domestic work

as exemplified in Walton Hall, Warwickshire. His church work was sound and workmanlike; as typical examples may be cited St. Mary Abbot, Kensington (recently damaged in a raid), St. George, Doncaster, and All Saints, Sherbourne, Warwick (1864).

Scott's most prominent work was perhaps the Albert Memorial, in the execution of which he had the assistance of the best craftsmen of the period, including Skidmore, the art metal worker. "This Memorial is assuredly the most consummate and elegant piece of elegiac art which modern genius has produced. . . . It is indeed a possession which ennobles the capital, and which we may show to visitors from abroad. And they will not fail to admire and applaud it, above all while they reflect that an age called money-seeking and ideal-less set up this exquisite and costly tabernacle of the Arts. . . ." (*Daily Telegraph*). Could high principles do more? At least Scott had attempted that marriage of great art with the great occasion which so seldom takes place, and is so rarely a happy one.

Of other church architects, we may mention G. E. Street, best known for his Law Courts design, and J. D. Sedding, who was brave enough to forsake the Gothic school on occasion. Holy Trinity, Sloane Street, is a striking and attractive building, unfortunately rather damaged in a raid; the Holy Redeemer, Clerkenwell, is a well-proportioned classic design. Towards the end of the century we find four men of at least equal calibre employed on church work—J. L. Pearson, designer of Truro Cathedral (135), J. F. Bentley, architect of Westminster Cathedral, and Bodley and Garner, authors of Clumber Church, Nottinghamshire, and the very beautiful little church at Hoar Cross, Staffordshire. Pearson had been in practice for many years, his Quar Wood House, Gloucestershire, of 1857, following the theories of Ruskin, whose *Seven Lamps of Architecture* (1849) and *Stones of Venice* (1851) had given him an unparalleled reputation as a critic. Ruskin indeed became the oracle of the last half of the century, though his theories seem to have been more ethical than explicit, and it is difficult for modern readers to reconcile his plea for honesty and simplicity with the sham mediæval trend of his taste.

Even the classic school tended to copy French or Venetian mannerisms, as may be seen in Sir James Pennethorne's Geological Museum, Piccadilly (now unfortunately demolished), and E. M. Barry's Charing Cross Station. Gothic invaded the secular world in the curious and repellent style of Waterhouse's Natural History Museum at South Kensington, and in such provincial buildings as William Doubleday's Cobden Hotel, Birmingham (1882) (136), while at Oxford T. G. Jackson was building the new Examination Schools in a florid style described as "revived Elizabethan."

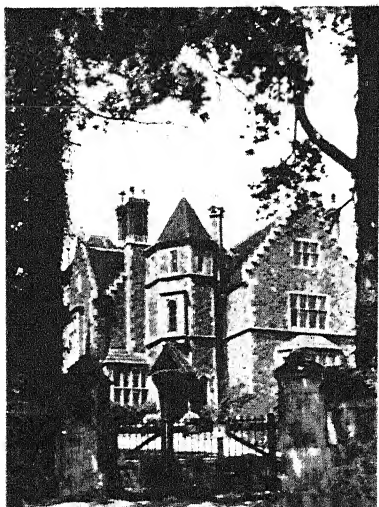
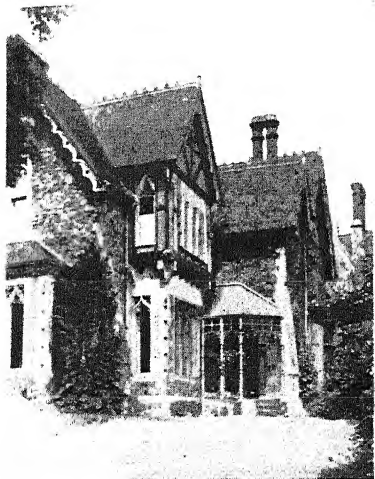
If Gothic exponents had agreed to erect only churches, and left secular buildings to the classic school, results might have been

better, though still illogical; but the haphazard adoption of style according to the caprice of architect or owner made our cities a medley of unrelated façades reminiscent of nothing so much as a gigantic architectural Madame Tussaud's. Thus when travel added a knowledge of every country from China to Peru, as it did by the end of the century, street architecture was on its way to become a Bedlam before which even the strongest might blench.

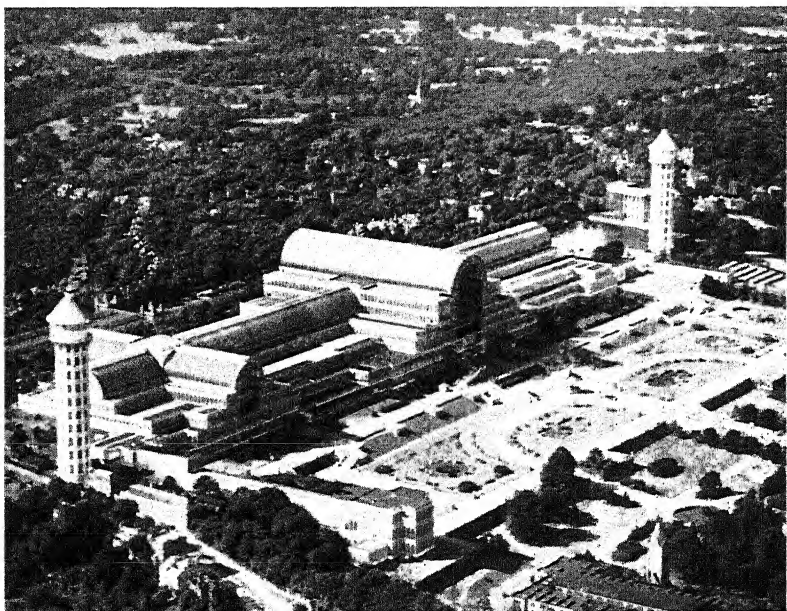
Moreover, the Gothic enthusiasts who had thought it possible to recreate mediæval architecture, without recreating the Middle Ages which produced it, had begun to realize the error of their thesis, while those who had hoped merely to understand and appreciate the Gothic style began to discover the real genius of mediæval masons.

Fortunately many designers were feeling the need for a return to unity and simplification. This movement took two forms. The revolutionaries, headed by William Morris, attempted to develop a sane and reasonable style on logical lines, while the more timid discovered in the earlier Renaissance a precedent for solving much the same problem. Morris built himself a house at Bexley Heath, which was designed by his friend Philip Webb, under his inspiration (1859). "The Red House," as it was called, does not appear very revolutionary to us, but it caused a considerable stir, and may be considered the forerunner of garden city houses such as were built later at Letchworth and Welwyn. The torch thus lit was carried on by such architects as Professor Lethaby, C. F. A. Voysey and C. R. Mackintosh, the last two forming a link with the Modernist school which will be more fully dealt with later. The more conventional school took refuge in the style christened "Queen Anne," the popularity of which was increased by the dismal ineptitude of such Gothic designs as Street's Law Courts—at least from the point of view of its users. This revived Renaissance may be considered as akin to the King Jamie's Gothic of three hundred years earlier. It was an attempt to find in existing precedent a solution for problems which had already caused a breach with the old tradition. Now, as then, it was impossible to look back, and though the reaction had a steadying influence, it could only form a jumping-off place for a new era.

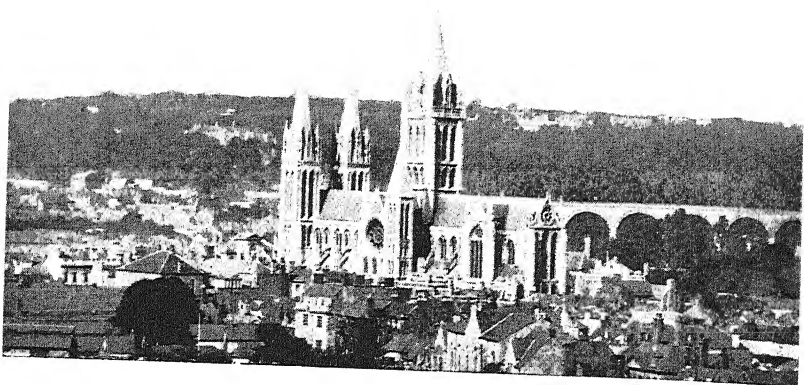
The first well-known exponent of the "Queen Anne" style was Norman Shaw. His early designs were Gothic or Elizabethan in character, as exemplified in his houses at Dawpool (138), Cheshire (now pulled down), and Leyes Wood, Sussex; but he soon developed a later Renaissance manner, at first rather tentatively, as in Old Swan House, Chelsea, and Albert Hall Mansions, but later in the grand manner as at Bryanston Hall, Dorset (137), and the Piccadilly Hotel. Houses in Queen Anne's Gate show stages in his intermediate style, while more truly Victorian is New Scotland Yard,



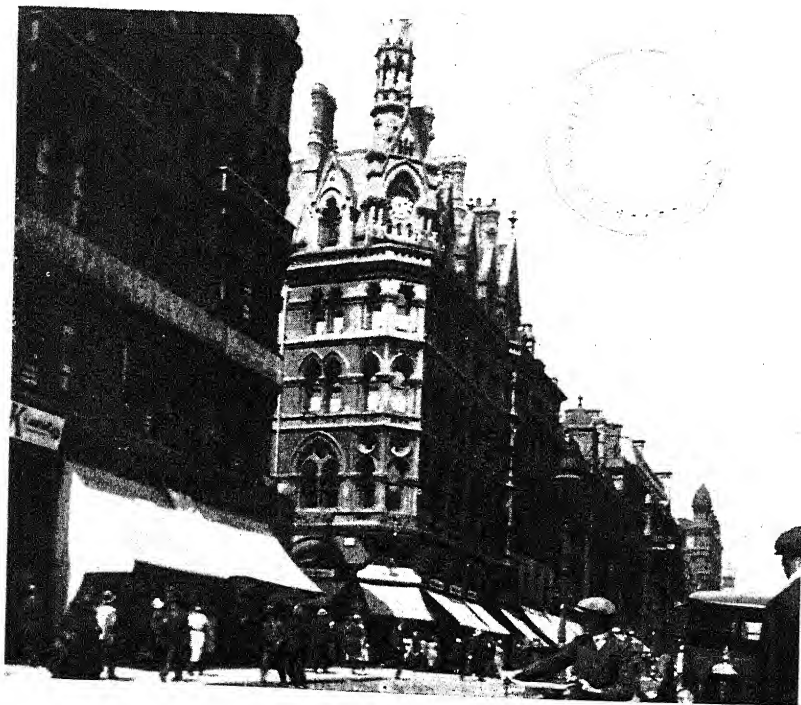
132, 133 VICTORIAN GOTHIC VILLAS, GREAT MALVERN, Worcestershire.



134 THE CRYSTAL PALACE, SYDENHAM, London. (Erected in Hyde Park, 1851, and removed to Sydenham; destroyed by fire, 1936.) Designer: Sir Joseph Paxton.



135 TRURO CATHEDRAL, Cornwall. 1886-1887. J. L. Pearson, *architect*.



136 COBDEN HOTEL, CORPORATION STREET, Birmingham. 1882. William Doubleday, *architect*.

described as "Anglo-Classic," and considered in its day to be much the finest modern building in London.

Though Norman Shaw was easily the best known of "Queen Anne" designers, a good deal of work was carried out in this and allied manners, particularly in the quieter residential suburbs of London. We may instance Bodley and Garner's house in Tite Street (139), and Ernest George and Peto's work at Collingham Gardens.

The over-ostentatious municipal work of H. T. Hare at Oxford, Stafford, Crewe and Henley developed from the same school, which, enlivened by the arts and crafts movement, is represented in the domestic work of Ernest Newton, followed at the end of the century by Sir Edwin Lutyens, Sir Guy Dawber, and Sir Robert Lorimer. The work of all these architects is marked by a great improvement in the quality and texture of materials, which also reached the Gothic work of such architects as G. G. Scott the younger, whose churches of St. Agnes, Kennington, and St. Mark, Leamington (1879) are on a far higher level than any creations of his more famous father.

The red and blue brickwork of the polychromatic period was succeeded by brick and stone, used rather in the Siena manner by Sir Aston Webb at Birmingham University and Dartmouth Naval College, and by J. F. Bentley at Westminster Cathedral. Sir Aston Webb, who also designed the Birmingham Law Courts and the Victoria and Albert Museum, besides refronting Buckingham Palace, did much to enhance the social status of the architect, as no doubt did Col. Sir R. W. Edis, who is said to have boasted of working for no mortal meaner than a Duke!

What little town-planning existed in the nineteenth century was largely a survival from the eighteenth. Cheltenham and Leamington are really eighteenth century in inspiration, though their execution falls in the early years of the nineteenth. Regent Street, too, was inspired by the earlier period, though its tendency to piecemeal development foreshadows the meaner schemes of later days. It was hardly to be expected that an age which invented the "cottage orné" would take much interest in ordered planning, and, apart from an occasional model village or labyrinthine park, we must pass to the end of the century for further examples. Improvement of some of our growing cities then became imperative, and the creation of new streets began to be combined with clearance of the more noisome slums, as in the case of Corporation Street, Birmingham (1875) (136). Four years later George Cadbury moved his factory into the country and began work on the model village of Bournville. It is schemes such as these, based on the secure, if unexciting, foundations of necessity and social improvement, which form the basis of modern town-planning in this country. Meanwhile, however, the speculator was allowed to continue the uncon-

trolled expansion of our towns, which was to cause so many heart searchings in the next century.

In lesser buildings the outstanding contributions of the nineteenth century were the villa and the "bye-law" street. Not that the former was a Victorian invention, for it was only a development of the terrace house (128) of the previous century, though a great change of taste had occurred. "London at this time (1804) was not beautiful. Apart from the public buildings, its 160,000 houses . . . were not lovely to look upon. Utilitarian they were to a degree—long rows of brick built tenements with oblong holes for windows. There was no attempt at architecture; that had gone out with the first George; and during the first half of this century domestic architecture in this country was at its lowest possible ebb. Just fancy! In the first decade, Baker Street was considered 'perhaps the handsomest street in London.' Can condemnation go further?" (John Ashton, 1886, *The Dawn of the XIXth Century*).

We may not agree with Mr. Ashton's criticism of Regency architecture, but social conditions in the early part of the century were certainly very bad. The influx of workers into the industrial towns, particularly London, caused an incredible degree of overcrowding. Rents were exorbitant, and the poor slept in layers on the floors of rotting tenements, often with no other sanitary convenience than a hole in the floor. Children worked in the mills for long hours, so that they would even fall asleep by the roadside on their way to the miserable room they knew as home (not until 1819 was the working day legally limited to twelve hours). In fact the conditions of the workers at home compared very unfavourably with those of the slave abroad, though the latter caused a greater stir in the popular conscience. Here indeed was a contrast to the pleasant charm of the well-to-do world portrayed by Jane Austen, a world where a man could "jog along on £40,000 a year." On bridges at Bridport and elsewhere in Dorset there still exist notices threatening anyone damaging them with transportation, a fate meted out to six poor labourers of Tolpuddle, in the same county, for the outrageous crime of trying to form a union in 1834. Transportation, moreover, meant not mere banishment but the living hell of Botany Bay, where men condemned to death thanked God for so merciful a release.

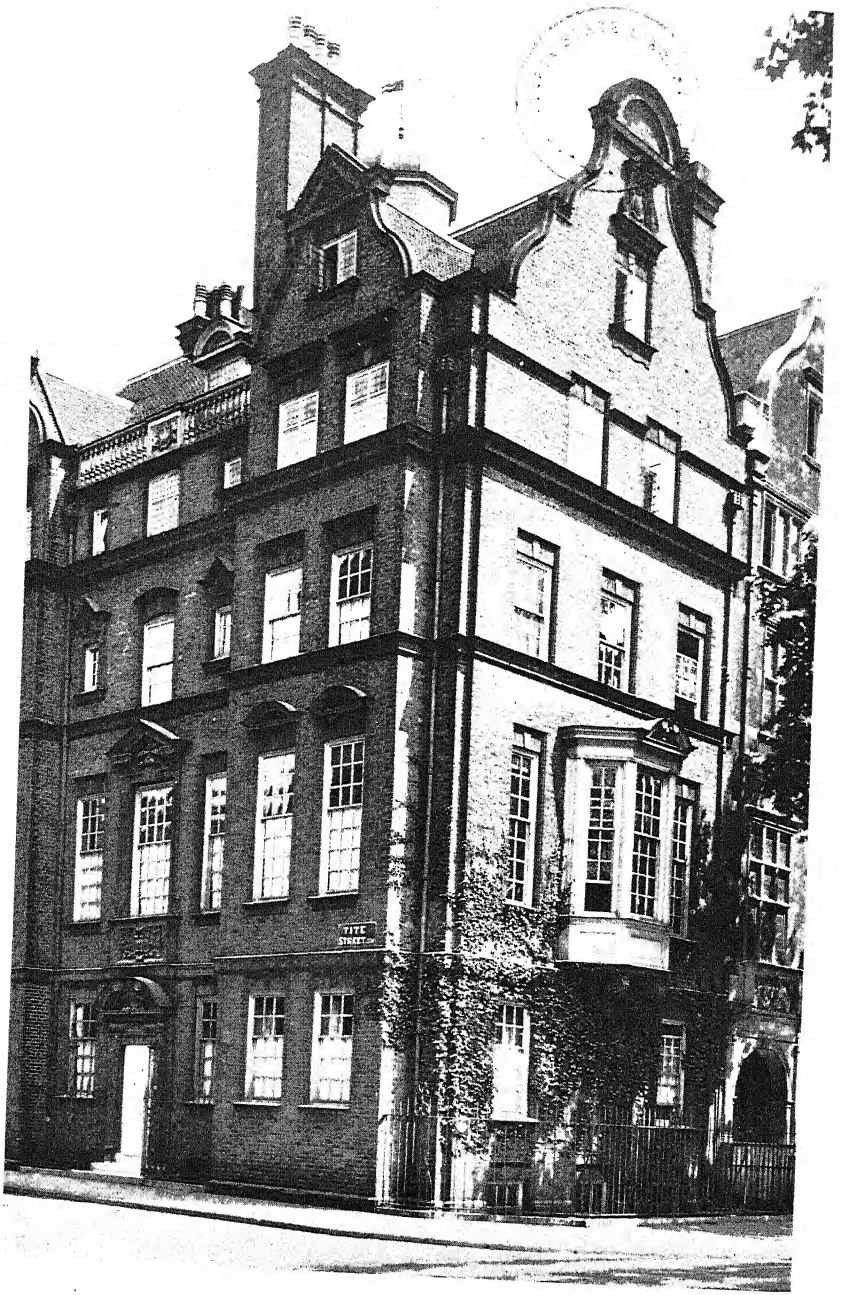
A contributory factor in bad housing conditions was the enormous expansion of population, which reached its peak in the sixties. Population increase in Europe had been exceptional for the previous five centuries, until improved sanitation and health services at last began to stem the corresponding mortality rate, thus aggravating expansion. The terrible slums of London and Glasgow, no less than those of Berlin, became such a reproach that housing reform was obviously a crying need, and much pioneer work was done in



137 BRYANSTON, Dorset. 1890. R. Norman Shaw, architect.



138 DAWPOOL, Cheshire (now destroyed). 1882. R. Norman Shaw, architect.



139 HOUSE IN TITE STREET Chelsea. Late Nineteenth Century. Bodley and Garner, architects.

Britain in the last half of the century, though even as late as 1906 we read "... the present conditions are thoroughly bad. Not only are lives lost through insanitary housing conditions, but, worse still, a chronic condition of low vitality and ill-health is fostered in our towns" (J. S. Nettlefold, *Practical Housing*).

Yet how much better is this picture than that presented in a medical report of a Liverpool cellar dwelling of 1843: "... the wife of a labouring man. She had been confined only a few days and herself and the infant were lying on straw in a vault through the outer cellar, with a clay floor impervious to water. There was no light nor ventilation in it and the air was dreadful. I had to walk on bricks across the floor to reach her bedside, as the floor itself was flooded with stagnant water. . . ." (Sherwood Taylor, *A Century of Science*).

Not until about 1870 did drainage and water systems begin to become adequate in our towns, while it was often the end of the century before such installations reached modern standards. The improvement can be traced in the death rate, which stood steadily at about 23 per thousand up to 1875, then fell to 17.7 by the end of the century and to 12.3 in 1920.

The pioneers of rehousing were a few industrialists, who planned model villages for their workers such as Port Sunlight, Bournville, and, later, Earswick, Yorkshire. Their work only touched the fringe of the problem, but helped to show in concrete form what could be done.

Parliament was also active over housing reform, and passed a good deal of legislation, largely of a restrictive and inelastic kind, which, though it effected much improvement in structure, resulted in the "bye-law" street so common in our city suburbs. It was still permissible to build fifty-six houses to the acre, though the old "back to back" house was now condemned. This form of housing had consisted of double rows of dwellings built back to back under one roof, without "through" ventilation, and even these double rows were so closely spaced as to preclude light and air in any reasonable quantity.

Middle class housing is represented by the villa, which in the early century was usually stuccoed, with simple but graceful details and elegant wrought or cast ironwork (122). As the century wore on, the detail became clumsier and more pompous. About 1860 the most usual type was brick, with pointed windows and bastard Gothic details in stone or stucco. Blue and cream brick patterning appeared, and then the romantic composition with porches and broken roof lines (132, 133). In the eighties a "Queen Anne" flavour began to be noticeable, then a gradual simplification with a hint of cottage architecture. As with more monumental work, design depended so much on individual caprice that it is only

possible to indicate a few marked tendencies among a mass of very diverse fashions. The reader may amuse himself by tracing the local tendencies and styles of his own neighbourhood, and if he can record them with photographs and facts, he will be rendering a valuable service to the future architectural historian, and will be remedying a defect in most guide-books, whose author's taste appears seldom to extend beyond the seventeenth century.

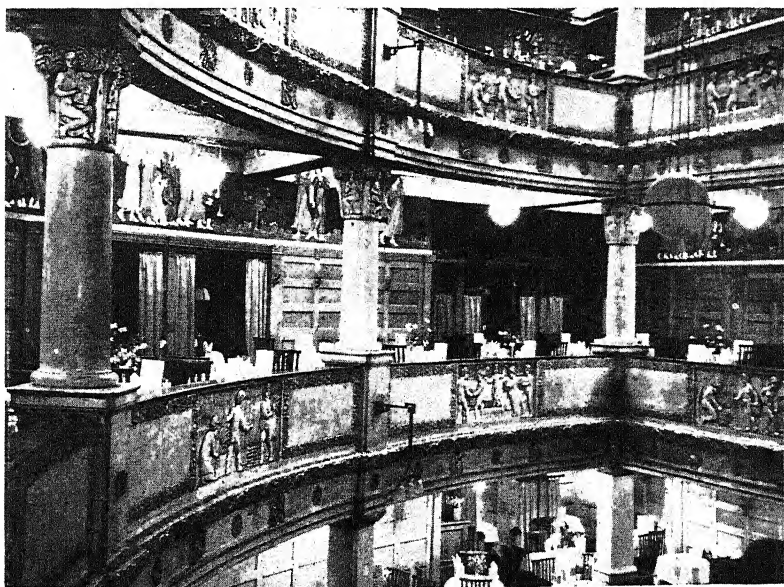
The interior of the Victorian villa is still too fresh in memory to be treated in its proper perspective. Its greatest fault was an overabundance of furniture, which was either large and massive or frail and fanciful, and was accompanied by a mass of garnishings and knick-knacks. The wax fruits and artificial flowers, tasselled valences and draped piano legs of Victorian days are still, perhaps, too much of a music-hall joke to be treated with the seriousness necessary to a work of this nature, and it is difficult to realize that people of sound common sense did, in fact, lead active and reasonable lives in such surroundings, which were no more strange to them than present-day interiors are to us.

In previous chapters we have recorded something of the progress of sanitation, which made great strides in the nineteenth century. The bath and water closet were developed pretty well into their modern form. A good deal of this improvement was due to public interest, for drains had become a possible topic of polite conversation, and the upper classes at least were becoming knowledgeable on the subject. Even smaller houses had water closets and sometimes bathrooms. By the end of the century the privy had largely disappeared from urban areas, though the poorer classes were abominably served in both respects, and it is hardly surprising to find a Lancashire collier of the mid-century giving evidence that no one of his acquaintance washed beyond their hands and faces (Sherwood Taylor, *A Century of Science*).

We have also to note the trend of garden design, which was never more artificial than in this century. Raised beds, serpentine paths and the crudest of colour schemes distinguish the period, which had a passion for specimen trees, and the cutting up of lawns by geometrically shaped flowerbeds. Lobelias, geraniums and calceolarias flaunted their discordant colours, and borders were massed with brilliantly coloured "bedding out" plants—the fashion still lingers on in some of our municipal gardens. At the end of the century a return to more natural forms, and to carefully planned colour harmonies, was heralded by the pioneer work of Miss Gertrude Jekyll.



140 "TOWERWOOD," NORTHWOOD, Middlesex. 1895. R. A. Briggs, architect.



141 DELLER'S CAFÉ, Exeter Devon. 1900. (Now destroyed.)



142 LONDON COUNTY HALL, Westminster. 1912-1922. Ralph Knott, *architect*.



143 THE CITY HALL, WITH THE ART GALLERY AND MUSEUM, Cardiff. 1920. Lanchester and Rickards, *architects*.

THE TWENTIETH CENTURY

It is obviously difficult to treat the work of contemporary designers in the same objective manner as that of past periods, where distance has made possible a clearer and less biased view. The author has, however, endeavoured to preserve the same detachment in this account of the first half of the present century, the background of which is the now familiar one of vast mechanical and economic expansion, disrupted by the greatest wars in history.

In the early work of the century the main schools of design were still largely divided into "Classic" and "Gothic," and any architect of repute was expected to be able to compose in either style. Archaeological research had charted and catalogued not only the mediæval periods, but those of the ancient world, and nearly every other known style, while the phases of the English Renaissance were now being tackled with equal efficiency by such men as J. A. Gotch, Mervyn Macartney, and Sir Reginald Blomfield. Indeed, the architect and archæologist had now so much in common that a study of architectural history was the primary subject of architectural education. Under these circumstances it was hardly surprising that design became almost automatically considered as "period design," while improved scholarship made such compositions much more convincing, as revived designs, than those of the previous century.

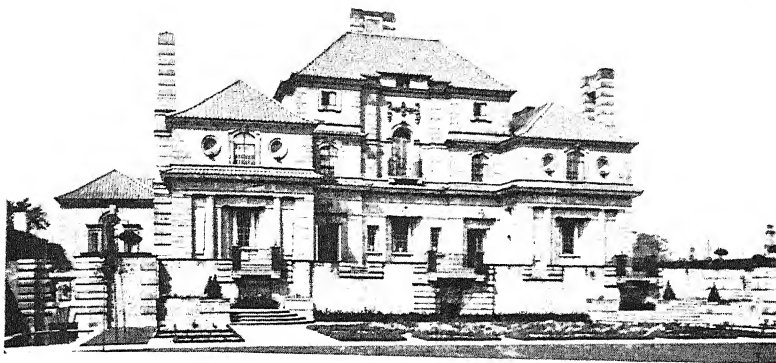
Evidence both of the inbred sense of period design and of improved technique is provided, for instance, by the numerous attempts to define Gothic architecture in terms of structure or appearance. From John Ruskin to Francis Bond, theories were propounded defining the art as one of pointed arches, ribbed vaults, or systems of buttressing. The rather obvious statement that it was a style characteristic of northern Europe during the period *circa* 1200 to 1500 A.D. would have implied an artificiality in attempts at revival which designers were unwilling to admit.

In contrast, there was *circa* 1902 a minority attempt to make a complete break with tradition, in the style of *L'Art Nouveau*—an attempt which proved premature and abortive, largely owing to the trifling and meretricious nature of its detail. This brief interlude is probably seen at its best in such buildings as Deller's Café at Exeter (141) (since raid-destroyed), and the style tinged the work of such pioneers as C. R. Mackintosh and C. F. A. Voysey, while it is somewhat akin to the designs of that once well-known draughtsman, Walter Crane. Mackintosh had built two extensions to the

Glasgow School of Art, and though his executed work is slight his influence was such that early work of the modern school in Germany was dubbed "Mackintoshismus." C. F. A. Voysey upset conventional theories by deserting the usual aims of solidity and picturesqueness for clean cut shapes, which the old-fashioned found too "cardboardy" for their taste. There was little immediate support for this movement, once the initial novelty had faded, and it was on the Continent—particularly in Germany and Holland—that the style was developed and improved in the manner since called "Functional" or "Modernist." There it became largely associated with the socialist movement, and did not come into prominence until after the "great war" of 1914-18, when it was re-imported into England in the teeth of bitter criticism.

Meanwhile the Gothic school had received fresh impetus from the work of Sir Giles Gilbert Scott, grandson of the designer of the Albert Memorial, who in 1902 won a competition for a great new Anglican cathedral at Liverpool, at the early age of twenty-one. His design, greatly modified in the course of execution, though it owes something to Spanish Gothic, seems fresher and less imitative than that of Pearson's Truro (135), and better organized in its parts (146). There is more of the architect and less of the archæologist in its composition, as in that of the many other churches designed by Scott, among which may be instanced St. Paul's, Derby Lane, Liverpool; Terriers, High Wycombe, St. Alban's, Golder's Green, ; and the Charterhouse War Memorial Chapel. There were of course many architects besides Scott designing in neo-Gothic of some kind, the best known probably being Temple Moore, but space precludes any detailed mention of their work here.

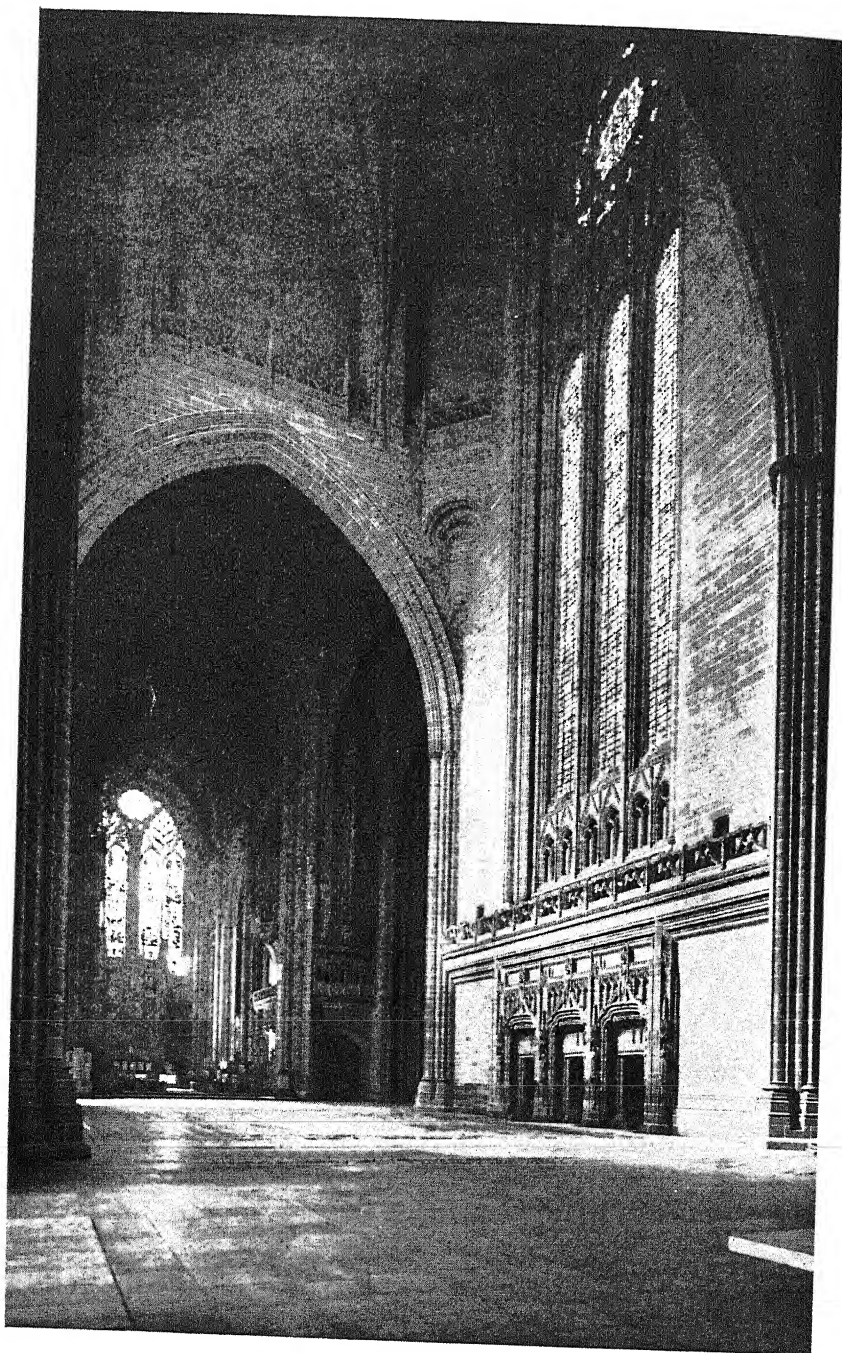
What Scott was doing for the Gothic school, Sir Edwin Lutyens was achieving for the Classic and the English vernacular architecture of our countryside. Starting as a country house architect, Sir Edwin's earliest work, such as Crooksbury (1890), hardly differed from that of other well-known contemporary designers (*e.g.*, Ernest Newton); but by 1899 "Orchards," Godalming, already exhibits the imaginative massing and use of good materials which were to make him perhaps the most famous of all architects of the period. The next phase was, as in Norman Shaw's career, a growing interest in classical design, first used in interiors, then monumentally at "Heathcote," Ilkley (144), which, despite the astonishing dexterity of its conception, only just avoids pomposity. Having achieved fame as a prolific and imaginative designer of country houses, Lutyens next turned to urban building, in which he developed a fine classical manner, which has since had many critics, but more imitators. Britannic House, Finsbury Circus, is a good example of this phase (145), while on a smaller scale the little bank adjoining St. James, Piccadilly, is particularly charming. His many war memorials may



144 HEATHCOTE, ILKLEY, Yorkshire. 1906. Sir E. Lutyens, architect.



145 BRITANNIC HOUSE, FINSBURY CIRCUS, London. 1926-1929. Sir E. Lutyens, architect.



146 LIVERPOOL CATHEDRAL. Early Twentieth Century. Sir Giles Gilbert Scott, *architect*.

be represented by the Cenotaph, Whitehall, and the memorial arch at Leicester. His work at New Delhi lies outside the scope of this book, but not so his design for the new Roman Catholic cathedral at Liverpool, which perhaps represents one of the finest of the last flourishes of neo-Classic in this country.

"Lutyenesque" Classic has indeed become the accepted style for public and official buildings, and may be seen to advantage in the designs of H.M. Office of Works, and of many of the banks in the inter-war period of 1919-39.

In garden design, also, Lutyens, in collaboration with Miss Gertrude Jekyll, did much to revive the glories of gardening. Miss Jekyll's own garden at Munstead Wood, Surrey, is an excellent example, while in the grand manner may be instanced the magnificent garden at Hestercombe, Somerset.

Meanwhile Cotswold architecture was being enriched by the designs of Sir Guy Dawber, whose career in some ways anticipated and paralleled that of Lutyens. This period of fine house design may show a private extravagance which already seems out of place in these poorer and more democratic days, but at least it produced some of the most charming buildings of any time or country, and has left its mark on the architecture of our age. Indeed, practically every architect of note of the first quarter of the century was trained in the country house school of design.

Urban building of the earlier part of the century was usually classical, of a somewhat commercial and undistinguished character. The façades of Kingsway are a fair sample, followed by those of Aldwych, with American influence visible in the somewhat bleak elevations of Bush House. This takes us to the end of the first quarter of the century, by which time Regent Street was also being rebuilt piecemeal in an equally undistinguished jumble of Classic,* though Sir Reginald Blomfield's handling of the Quadrant, by extension of the motif of Norman Shaw's Piccadilly Hotel façade, gives a little more character to this end of the street.

Probably the best Classic building in London of the first quarter of the century is the London County Hall at Westminster (142), designed by Ralph Knott, and since extended by Sir G. G. Scott. It is big enough to form a satisfactory composition in itself, and thus avoid the besetting sin of the period—the independent design of adjoining frontages in unrelated shapes and styles. Actually, much of the detail of such neo-Classic work is often ingenious and scholarly, but the general mass is usually uninspired, and contributes nothing towards the main development of architecture.

In the provinces the best work is all by London architects, and we must particularly note the civic centre buildings at Cardiff (143),

* Liberty's were only allowed to use a version of Tudor half timber behind the main street.

the earliest of which, designed by Lanchester and Rickards, effectively displays the latter's characteristic baroque detail.

Perhaps even more successful are the less ambitious buildings of the provinces, which, like the "near-Classic" buildings of the seventeenth century, have a good deal of charm, and are indeed much more scholarly than those earlier examples. In this category we may place the minor work of the Lutyens school, and such municipal buildings as those at Worthing (Cowles Voysey), Taunton (Vincent Harris) and Norwich (C. H. James and Rowland Pierce). As already noted, design is almost entirely in the hands of London architects and their pupils, no effective regionalism being evident, apart from the work of the Liverpool School of Architecture and its followers, again owing their main inspiration to London.

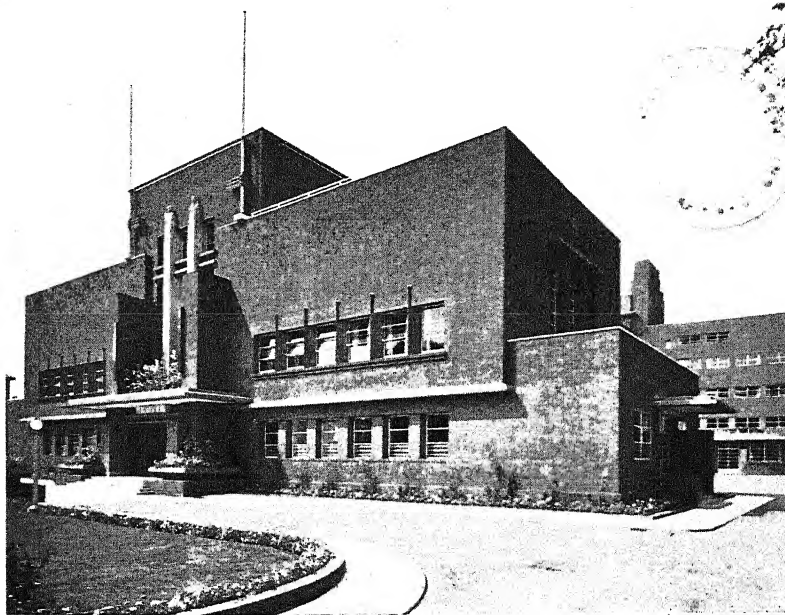
A growing rationalization and simplification now become apparent, as in the work of Edward Maufe (Guildford Cathedral) and Grey Wornum (Royal Institute of British Architects, Portland Place). It even invades such work of Sir Edwin Lutyens as his Vincent Street flats, Westminster.

At the beginning of the century, housing conditions were still very bad (see p. 102). It was only just becoming realized that adequate housing must be provided for the poorer classes, even though this was palpably impossible at an economic rent. Local authorities began to provide blocks of cottages or tenements for poor people, but as the official architect was at yet seldom well trained in design, the result was not wholly admirable. It must in fairness be added that the outside consultant was often quite as bad, and it was not until after the great war of 1914-18 that any noticeable improvement occurred. Housing was then so great a problem that it was tackled on a large scale, often with excellent results, as in the work of the London County Council under their then architect, Topham Forrest. Estates such as Roehampton are architecturally excellent, as are some provincial housing schemes, notably those at Winchester (Curtis Green) and some by Hennell and James, and by Cecil Howitt. By the thirties, it began to be realized that the garden suburb was not a complete solution of the problem, and great blocks of flats began to be erected in London, Leeds, Liverpool, and elsewhere. By this time the official architect was becoming a man of great power and prestige, and it was soon apparent that the Government and municipalities were to become the principal patrons of architecture in the future, just as the Church had been in the Middle Ages, or the gentry in the eighteenth century.

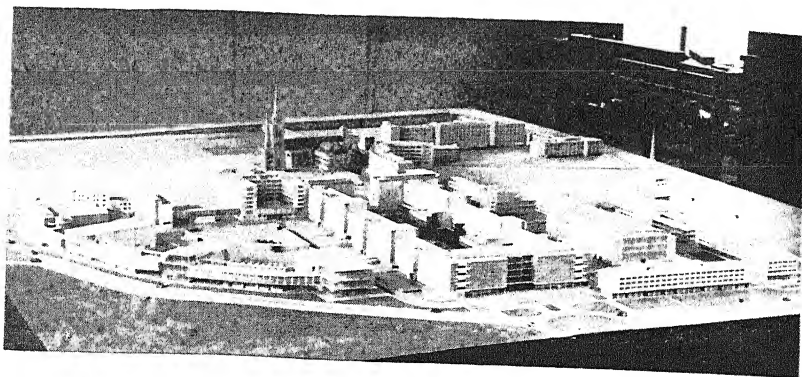
In private houses, the tendency was towards greater convenience and domestic efficiency, though economy has often compelled smaller rooms and lighter construction as the century has advanced. At first the "olde worlde" house was very much in vogue, as



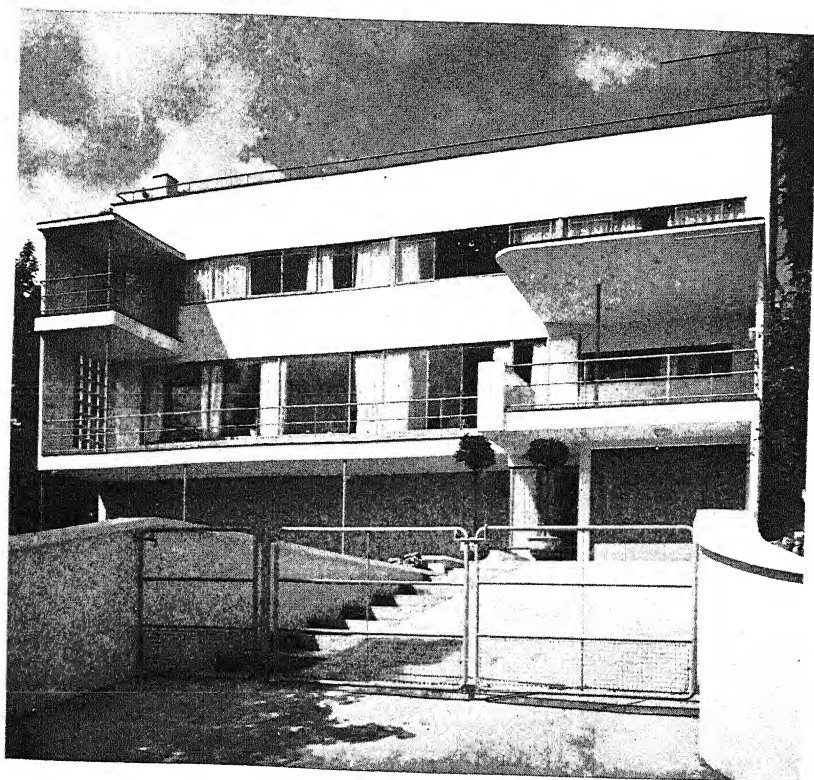
147 FACTORY AT BEESTON, Nottingham. 1932. Sir Owen Williams, *architect*.



148 THE ROYAL MASONIC HOSPITAL, RAVENSCOURT PARK, London. 1933. Sir John Burnet, Tait and Lorne, *architects*.



149 RECONSTRUCTION SCHEME, COVENTRY, Warwickshire. 1943. D. E. E. Gibson, *architect*.



150 SUN HOUSE, HAMPSTEAD, London. 1938. E. Maxwell Fry, *architect*.

evidenced in the work of Baillie Scott, and the fashion persisted until the thirties under architects as well known as Oliver Hill, though poor imitations eventually discredited the style, at least in architect-designed houses. In interiors, the tendency has been towards greater simplicity, and an elimination of "fussy" detail, sometimes carried to extreme lengths. This simplification has, generally speaking, caused a greater appreciation of well-designed household articles when available, and the public has repeatedly shown its interest in such improved designs when they have been intelligently marketed, and have not been too intellectual in character. It would be rash to expect more of any public in any age.

Perhaps the best work of the period occurs at Letchworth, Welwyn Garden City, and Hampstead Garden Suburb, which have formed models for housing throughout the country. Letchworth and Hampstead were planned by Sir Raymond Unwin and Barry Parker. Welwyn, planned by Louis de Soissons, represents the ideals of Ebenezer Howard and benefits from the experience gained by him at Letchworth. The fame of Welwyn has become world wide and its principles were generally accepted as final, until the advent of such apostles of a more urban outlook as Thomas Sharp, who even preached a return to the built-up frontage. Certainly there is no more wearying sight than the semi-detached villa, repeated *ad nauseam*—a fault which Welwyn itself avoids. In fact the speculative builder has done more than anyone to destroy the ideals of the garden city school. It is the builder and lesser architect who to-day form the greatest problem in urban—and for that matter rural—design. Control by an official architect seems to be the answer that is at present being sought. Whether it will be effective remains to be seen.

The small builder had already been fiercely attacked by Clough Williams-Ellis in his book *England and the Octopus* (1928), but it took some years to arouse officialdom. Parliament at last passed an act for the restriction of ribbon development (1935), which did not go very far, but marked the beginning of an official control which, as already noted, seems likely to spread. So far such control has not been very imaginative, even the garden city movement being in many cases reduced to the idea of twelve houses to the acre.

We have seen how, in the nineteenth century, town improvement became imperative, and how town-planning, as we now know it in this country, has developed as an amelioration of industrial conditions, rather than from any inherent love of fine towns. It must be admitted, also, that so far town-planning has been a matter of lip service rather than of practical example, and that, though we all admire the towns of Sweden or Holland, and frequently in more normal times spend considerable sums in travelling to see them, we are curiously loath to follow their example ourselves. (That is why our villages which have usually been moulded by some paternal, if tyrannical, squire, are so much more attractive to the visitor than

our towns.) Not that we are alone in such mistrust of orderly development. Many a Canadian town, for instance, still preserves in its archives an expensive set of plans prepared by Mr. Thomas H. Mawson, which it has never quite found courage to adopt.

Our one contribution to the art of town-planning is the garden city and suburb, of which Welwyn and Hampstead are the type examples. So proud have we been of this contribution that only of late years have designers appeared to have any wish to go further, while no term has been more abused by the speculator than that of "garden city." Other excursions into the art of planning have been largely limited to slum clearance and new streets such as Kingsway, London, and while this has the advantage of leaving a clear field for experiment, it has left us with a largely paper science at a time when many of our cities are sufficiently devastated to demand orderly re-planning. It would indeed be a painful and disgraceful experience if we were to rebuild them on their original lines, as was done in France and Belgium after the last war, with such depressing results. The opportunity is presented to us as clearly as it was to the monks of Ely when they built their magnificent octagon, and it is surely not beyond our powers to rise equally triumphant over the difficulties involved. There is space here to refer only to one scheme of re-planning, that of Coventry, by D. E. E. Gibson (149), which shows an imaginative handling rare in English town-planning. Traffic circulation and access are generously provided for, as befits a centre of the motor industry, yet the main shopping centre is secluded from vehicular traffic, and is architecturally related to the ancient churches. The individual design of buildings as shown in the model is excellent, and the whole lay-out refutes the common gibe that English cities are designed about their drainage systems. It is a fine example of the free yet organized planning now coming into vogue.

Meanwhile, in Germany, "Modernist" architecture had made very great strides. When the tale of its early development is more fully told, we may indeed realize how much we owe to our present foe in this respect. The first pioneers were followed by men such as Professor Gropius, who himself trained a very efficient band of followers. Peter Behrens and Erich Mendelsohn produced designs of real polish, very different from the first clumsy attempts at rationalism, and it was not long before news of their exploits began to be eagerly followed over here. In fact all these men have since practised, or designed buildings, in this country.

In Holland, too, the work of H. P. Berlage was followed by that of designers such as W. M. Dudok and J. J. P. Oud, while even Sweden, which had produced a simplified traditional architecture of almost Grecian dignity, began to turn more and more to purely rational forms.

In this country the first pioneer work of note was a house at Northampton designed for Mr. Bassett Lowke by Professor Peter Behrens of Vienna, in 1926. It was a very amateur affair compared with Behrens' later work on the Continent, but marks the practical introduction of "Modernism" into England. It was followed by a small housing scheme at Silver End, Essex, designed by Thomas Tait of Sir J. Burnet & Partners.

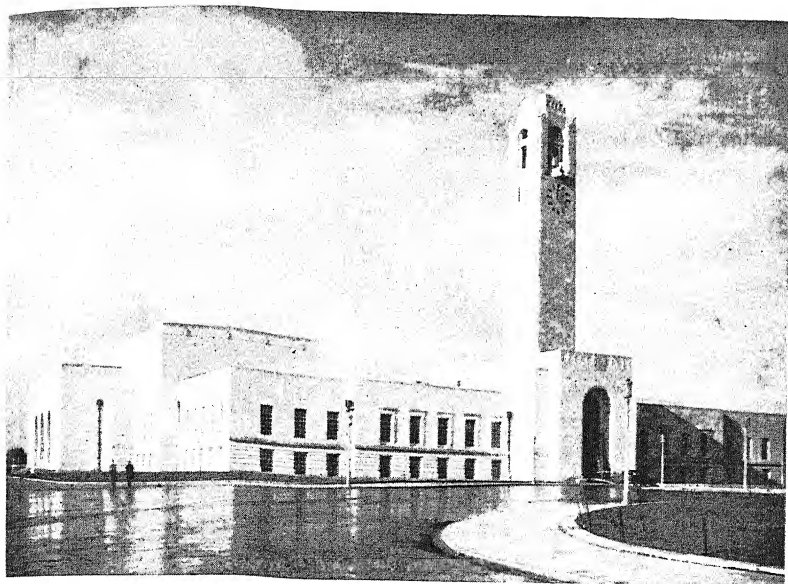
In London the first major building representing the new influence was perhaps the office block of the London Passenger Transport Board in Westminster, designed by Adams, Holden and Pearson, though Tait's Kodak building in Kingsway, and Burnet's solid block of Adelaide House, London Bridge, had already shown tendencies in that direction. The Transport building owes much to hospital practice, and is notable for its sculpture, particularly the two figures by Jacob Epstein, which have created a good deal of controversy. Despite the work of Rysbrack and Roubiliac in the eighteenth century, and of Flaxman and Alfred Stevens in the nineteenth, sculpture has, except in monumental art, shown little vitality in this country since the Middle Ages, and the work of Epstein has done more than that of any other man to stimulate a public interest in the art.

The next landmark was the new Shakespeare Memorial Theatre at Stratford-on-Avon (1933), won in competition by Elizabeth Scott (niece of Sir G. G. Scott), and executed by her in collaboration with Chesterton and Shepherd. Built in the heart of the provinces for a public accustomed to associate rural England and Shakespeare with old world half-timber building, the structure at first caused a good deal of stir, and made a courageous challenge to conservative outlook. Yet in London no building of importance has been erected in the half-timbered style since Liberty's shop off Regent Street, which, though ingenious and accomplished, has proved hardly suitable as a unit of urban design. It is increasingly obvious that such a style can only look ridiculous in a world of steel and speed, and designers have begun to look towards the modern movement on the Continent with increasing interest. In France, too, le Corbusier was early writing in support of this movement with a volcanic enthusiasm which could hardly fail to obtain converts, for such faith is always infectious. His statement that the house should be a "machine to live in" has been misunderstood by conservative opinion, but has been received enthusiastically by the younger generation, which realizes that by it is meant only that the house should be efficient for living in, and that old and useless habits must not be allowed to obstruct that function. The general public of the nineteen-thirties was still hardly aware that such a thing as modernist architecture existed, and, though instinctively conservative, was largely indifferent.

It is not easy to describe briefly this newest type of building, which is mostly either welcomed with acclamation or excites horror and detestation. The white smooth walls of the average small house shine in the sun; balconies and square projections jut out with engaging irregularity in a manner reminiscent of contemporary cubism. There is a flat roof, perhaps approached by a little tucked away staircase, for the solarium or sunning-place is a prominent feature. There are long lines of plain glass window and everything is entirely asymmetrical (150). In the case of blocks of flats, long lines of projecting balconies sweep wholly or partially round the structure. It is unlikely that this type of building will spread universally in English town and country, and it remains to be seen how the white walls, with their suggestion of the tropics, will weather here—and there have been cases in which a flat roof has not taken kindly to the rains of an English winter.

But an increasing number of buildings now display the new tendencies, boldly or slightly according to the knowledge and courage of their designers, or the caprice of their clients. The Royal Masonic Hospital at Ravenscourt Park (Sir J. Burnet, Tait and Lorne) (148) was awarded the Royal Gold Medal of the R.I.B.A. as the best London building of its year (1933), while later works of the same architect, such as the German Hospital or the Burlington School for Girls, Hammersmith (1938 and 1939), are even more advanced in style. Another building having great influence both on design and structure is the new factory at Beeston, Nottinghamshire, designed by Sir Owen Williams for Messrs. Boots (147). Sir Owen is an engineer remarkable for his appreciation of the æsthetic possibilities of reinforced concrete design, and the new factory has something of the superb structural quality which still impresses us in the great mediæval tithe barns.

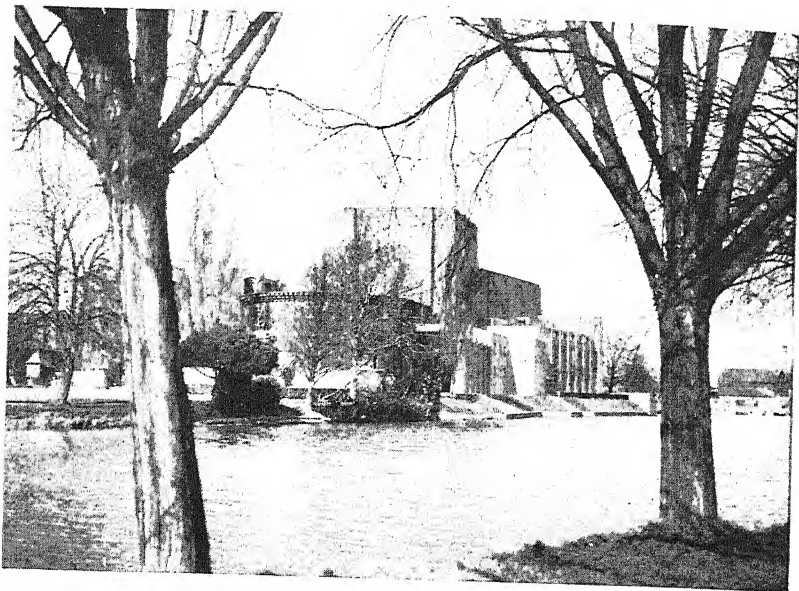
Thus, by the time war broke out again in 1939, the modernist school was becoming well established, and had even reached the stage at which poor commercial imitations had seriously depreciated the value of the title—at least in the opinion of its foremost exponents, who preferred increasingly to use the word “contemporary,” or some other description which they fancied to be less hackneyed. Examples of the best modern work may be seen in the designs of Maxwell Fry (house in Frognal, Hampstead (150), and flats in Ladbroke Grove (in association with R. Atkinson, C. H. James, Grey Wornum, and Elizabeth Denby)), Professor Gropius (Impington Village College, Cambridgeshire), Chermayeff and Mendelsohn (Bexhill Pavilion) (154), X. L. Velarde (St. Gabriel’s, Blackburn), Sir Owen Williams (Health Centre, Peckham), and Tecton (High Point Flats, Highgate). These few examples will give a fair idea of the scope of the movement, and show that it has now arrived well beyond the experimental stage.



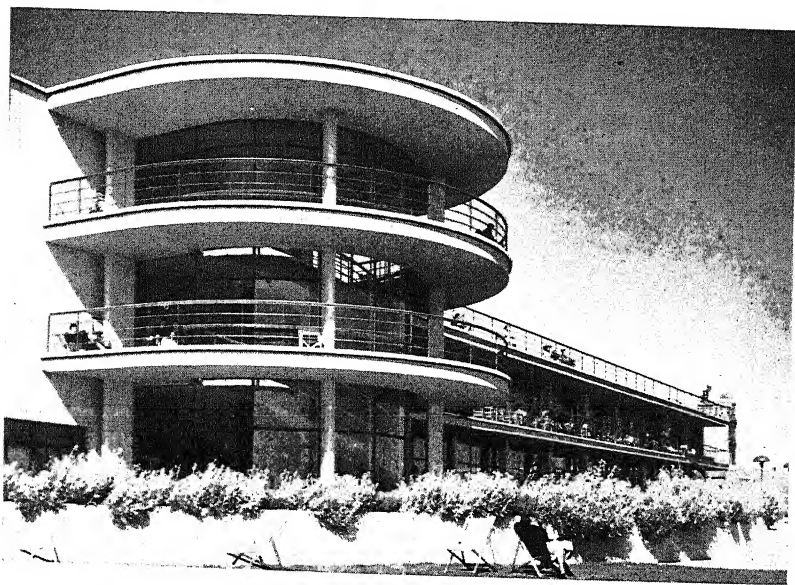
151 CIVIC CENTRE, Swansea. 1934. Percy Thomas, *architect*.



152 MUNICIPAL BUILDINGS, Norwich. 1938. C. H. James and Rowland Pierce, *architects*.



153 THE SHAKESPEARE MEMORIAL THEATRE, Stratford-on-Avon, Warwickshire. 1932.
Elizabeth Scott, Chesterton and Shephard, *architects*.



154 DE LA WARR PAVILION, Bexhill-on-Sea, Sussex. 1935. Mendelsohn and Chermayeff,
architects.

In many ways it is the true "Gothic Revival," for it revives the principles, rather than the details, of that style. It returns to free planning—balance rather than symmetry—and the structural basis, æsthetically expressed. Composition is romantic and dynamic rather than classical and static, owing more, perhaps, to synthesis than analysis. It is a characteristic of the movement, everywhere apparent, to find a new rational basis for civilization, and to cut out the old and dead wood of a decayed tradition. Its exponents have tried to see their problems clearly from a fresh standpoint, without prejudice, and in so doing have laid the foundations for a new era in design which will be as characteristic of its period as the mediæval and classic were of theirs. Art, it is true, has that attribute of the eternal which permits us to learn something from every age and period, but its physical form has always been most happy when it has best expressed the period of its birth.

Even after this war there will doubtless be argument as to whether future development should be "period" or "modern," but technical improvements have made such controversies largely academic, for new requirements and materials have sprung up, incapable of absorption into any extension of past styles, while the public will rightly continue to demand modern amenities such as were never conceived by our ancestors. It is to be hoped that the "battle of the styles" will thus at last resolve itself, for so long as style is the chief criterion, architecture comes a very poor second. It is only by forgetting style that we shall produce a national school of design of any distinction. Again, the new wine demands new bottles, and fortunately the pioneers of the past twenty years have shown us how to use technological improvements to provide them. The new art may still be a little experimental—still rather at the stage of "Hardwick Hall more glass than wall," but to go back to past styles is as unthinkable as to give up central heating for the central hearth, or modern plumbing for the privy of our ancestors. Whatever changes may come about in architecture after this war, one thing is certain—it will go forward, not back.

On philosophic grounds alone, it would be hard to justify the retention of period design for our buildings, when we have discarded it ourselves, and history everywhere proves the impotence of copyism in the world of art. It is to be hoped, indeed, that we shall put into practice the many excellent precepts which have so far existed mainly in the realm of theory. Every house must have an adequate hot water supply, fitted kitchen, and clothes cupboards. The primitive external plumbing, imposed on us by stupid, narrow Victorian bye-laws, which so amuses our American cousins, must give way to more scientific and properly protected systems. Bypass roads must be properly planned as traffic arteries, and sterilized against building (for some years before the war British road casualties

approached an average of a quarter of a million each year). Each building must be properly designed in relation to its neighbours.

All these things are already well known, yet how seldom are they put into practice! It is no more expensive or impossible to build scientifically than haphazardly; indeed it is vitally necessary to our urban economy that a proper system should be adopted if our towns are not to be strangled by their own labyrinthine contortions. The scientific organization of architecture for modern progress is not an extravagance, but an economic necessity—a natural æsthetic expression of the modern way of life.

Good architecture cannot, however, be produced merely by the training of competent architects. That such men are essential must be evident to anyone who has read these pages, but without an intelligent and interested client the best architect is helpless. That is why this book is addressed to the general reader. Nor can the arts flourish unless it is possible for the artist to make a reasonable living. If even one half per cent of the money spent on building were reserved for adornment by painter or sculptor, it would be sufficient to found a flourishing school of fine art in place of the half amateur nucleus now surviving. Lest this may be thought idealistic and impracticable, the reader may be reminded that the material necessities of life can now be produced by quite a small percentage of the world's population, and that there is no more urgent problem than to find remunerative employment for the remainder. As to the organization which is likely to develop, it is, perhaps, idle to speculate, though it seems certain that it will be on such a scale that the designer and business manager can no longer continue to be one and the same person. Whether the business manager be drawn from the ranks of architects, engineers—or perhaps financiers—will, it is hoped, depend on the nature of the work rather than on the intrigues of the individual. It is clearly a case for co-operation between all concerned.

Courage and honesty will be as necessary in post-war art as in post-war politics, and with them we may achieve that happy marriage of art and scientific construction which was characteristic of the best periods of our not ignoble past.

APPENDIX

STYLES AND PERIODS OF ENGLISH ARCHITECTURE

THE following terms and dates are commonly accepted as a rough classification of architectural periods, though there is a good deal of overlap, particularly in later times, when more than one style often occurred concurrently over a considerable period.

A.D.

- 43.	Pre-Roman.		
43- 446.	Romano-British.		
590-1100.	Saxon.		
1060-1100.	Early Norman.	}	Romanesque.
1100-1145.	Late Norman.		
1145-1190.	Transitional.		
1190-1245.	Lancet or Early English.	}	Gothic or Pointed.
1245-1280.	Early Geometrical.		
1280-1315.	Late Geometrical.		
1315-1360.	Curvilinear.		
1360-1485.	Rectilinear or Perpendicular.	}	Classic.
1485-1603.	Tudor.		
1500-1650.	Early Renaissance.	}	Classic.
1650-1750.	Later Renaissance.		
1750-1830.	Classical Renaissance and Randal.		
1830-1880.	Gothic Revival.		

The following terms are more exact, though often incorrectly and loosely used :—

1558-1603.	Elizabethan.
1603-1625.	Jacobean.
1603-1649.	Early Stuart.
1649-1660.	Commonwealth.
1660-1689.	Late Stuart.
1689-1702.	William and Mary.
1702-1714.	Queen Anne.
1714-1830.	Georgian.
1811-1830.	Regency.
1837-1901.	Victorian.
1901-1910.	Edwardian.
1910-	Neo-Georgian.

The following terms have been used in the text to denote the four quarters of the century :—

early	0-25	later	50-75
earlier	25-50	late	75-100

CONCISE LIST OF BOOKS ON ENGLISH ARCHITECTURE

THE following brief bibliography covers the best known books on the subject. Particularly useful and reasonably priced books are marked *. Standard works invaluable to students, but rather more expensive, are marked †.

GENERAL

- *T. D. Atkinson: *Handbook; Glossary; and Key.*
- W. H. Godfrey: *Story of English Architecture* (2 vols.); *Our Building Inheritance.*
- *Arthur Stratton: *Lecture Diagrams—2 Series: Styles of English Architecture* (2 vols.).
- **British Heritage Series*: Volumes on *Country House; Castle; Abbey; Church Design; Church Craftsmanship; Greater English Church; Cathedrals; Parish Church; Old Towns; Villages and Hamlets; Inns; Public Schools, Cottage, etc.*
- Britain In Pictures Series*: Volumes on *Cities and Towns; Villages; Inns; Ports; Public Schools; Country Houses, etc., etc.*
- *E. Vale: *How to Look at Old Buildings.*
- *C. H. B. & M. Quennell: *Everyday Life Series*: Prehistoric to Saxon (4 vols.); *Everyday Things Series*: Norman to Present Day (4 vols.).
- Legacy of England*: Country and Town Buildings.
- National Trust: 50 Years.* Various authors.
- †Nathaniel Lloyd: *Brickwork.*
- †C. F. Innocent: *Development of Building Construction.*

Works on the English House:—

- †N. Lloyd: *History.*
- †S. O. Addy: *Evolution.*
- J. A. Gotch: *Growth; English Houses.*
- H. Braun: *Story.*
- John Gloag: *Englishman's "Castle."*
- H. Muthesius: *Das englische Haus* (3 vols.).

Works on English Cities:—

- Hobhouse: *Oxford.*
- Vallance: *Oxford Colleges.*
- Steegmann: *Cambridge.*
- London Smith: *Bath.*
- W. H. Godfrey: *London.*

MEDIÆVAL

- †F. Bond: *Gothic Architecture in England; English Church Architecture* (2 vols.).
- *Church Art Series*: on *Woodwork; Fonts; Military Architecture, etc.*
- A. W. Clapham: *English Romanesque Architecture* (2 vols.).
- Prior & Gardner: *Mediæval Figure Sculpture.*
- A. Gardner: *English Mediæval Sculpture.*
- F. E. Howard: *Mediæval Styles of the English Parish Church.*
- A. Needham: *How to Study an Old Church.*
- †Crossley & Howard: *Church Woodwork; vide also Crossley's works in*
- **British Heritage Series.*
- W. R. Lethaby: *Westminster Abbey and the King's Craftsmen.*
- J. H. Harvey: *Henry Yevele.*
- T. Rickman: *Gothic Architecture.*
- J. H. Parker: *Glossary of Architecture* (Gothic) (3 vols.).
- †Garner & Stratton: *Tudor Domestic Architecture* (2 vols.).

RENAISSANCE

- †J. A. Gotch: *Early Renaissance Architecture, The English Home, 1625-1830; also* volumes on *Inigo Jones and English Houses.*
- Sir G. G. Scott: *Lectures* (2 vols.).
- Books of Measured Drawings by R. & J. A. Brandon; J. K. Colling, Johnson & Kersey, T. Dallman.

†H. A. Tipping : *English Homes* : numerous volumes from fifteenth to early nineteenth centuries.

J. A. Gotch : *Architecture of the (early) English Renaissance* (2 vols.).

Belcher & Macartney : *Later Renaissance Architecture* (2 vols.); vide also Garner & Stratton in previous section.

J. Nash : *Mansions of England* (4 vols.).

C. J. Richardson : *Mansions* (4 vols.); also *Remains*; and *Studies*.

†S. Sitwell : *British Architects and Craftsmen, 1600-1830*.

†R. Blomfield : *History of Renaissance Architecture* (2 vols.); and Concise edition.

Field & Bunney : *English Domestic Architecture, 17-18th cent.*

Wren Bicentenary Memorial Volume. R.I.B.A.

Works on the City Churches : by J. Clayton; G. H. Birch; G. Cobb.

Works on the Smaller House : by Richardson & Eberlein; Ramsey; M. Jourdain : *Simple Interiors*.

Basil Oliver : *Old Cottages*.

†A. E. Richardson : *Monumental Classic Architecture*.

†A. T. Bolton : *Architecture of R. and J. Adam* (2 vols.).

J. Swarbrick : *Robert Adam and His Brothers*.

18th Century Architectural Works :—

Colin Campbell and others and Woolfe and Gandon.

Vitruvius Britannicus (5 vols.).

Richardson's *New Vitruvius Britannicus* (2 vols.).

W. Kent : *Inigo Jones*.

J. Gibbs : *Book of Architecture*.

I. Ware : *Body of Architecture*.

R. & J. Adam : *Works in Architecture* (3 vols.).

W. Adam : *Vitruvius Scoticus*.

Works by Batty Langley and similar writers.

Various works by Sir John Soane and contemporary volumes on the Regency style.

Biographies :

G. Webb : *Wren*.

J. Summerson : *John Nash*.

A. Dale : *James Wyatt*.

L. Whistler : *Vanbrugh*.

19th and 20th Centuries :

Howard Robertson : *Architecture Arising*.

Sir C. L. Eastlake : *History of the Gothic Revival*.

Sir K. Clark : *Gothic Revival*.

B. F. L. Clarke : *Church Builders of the 19th Century*.

B. Ferrey : *Recollections of A. W. N. Pugin*.

H. H. Statham : *Modern English Architecture*.

J. M. Richards : *Modern Architecture* (Penguin Vol.).

Sir L. Weaver : *Modern English Country Houses* (several volumes).

C. Hobhouse : *1851 and the Crystal Palace*.

H. Muthesius : *Die englische Baukunst der Gegenwart*.

Monographs on the Work of Architects :—

Sir R. Blomfield : *Norman Shaw*.

Volumes on Sir. E. Lutyens and Sir R. Lorimer.

W. Gropius : *The New Architecture and the Bauhaus*.

Sir R. Unwin : *Town Planning*.

T. Sharp : *Town and Countryside*.



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